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PRICE
POVERTY REDUCTION BY INCREASING
THE COMPETITIVENESS OF ENTERPRISES



BANGLADESH POVERTY REDUCTION BY INCREASING THE COMPETITIVENESS OF ENTERPRISES (PRICE)

QUARTERLY REPORT: OCTOBER - DECEMBER 2010

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ACRONYMS AND ABBREVIATIONS

BADC	Bangladesh Agriculture Development Corporation
BARI	Bangladesh Agriculture Research Institute
BCLET	Bangladesh College of Leather and Engineering Technology
BDT	Bangladeshi taka (currency)
BFFEA	Bangladesh Frozen Food Exporter Association
BFRI	Bangladesh Fisheries Research Institute
BFVEA	Bangladesh Federation of Vegetables Exporters Association
BLSC	Bangladesh Leather Service Center
BSFB	Brinjal shoot and fruit borer
BSFF	Bangladesh Shrimp and Fish Foundation
CCM	Cold chain management
DAE	Department of Agricultural Extension
DCA	Development Credit Authority
DOF	Department of Fisheries
EPB	Export Promotion Bureau
FIQC	Fish Inspection and Quality Control Lab (DOF)
FY	Fiscal year
GDA	Global Development Alliance
GHERS	Greater Harvest and Economic Return from Shrimp project
GOB	Government of Bangladesh
HACCP	Hazard Analysis and Critical Control Points
IPM	Integrated pest management
ITC	International Trade Center
ISO	International Organization for Standardization
LCDF	Local Currency Development Fund
LGFMEA	Leather Goods & Footwear Manufacturers & Exporters Association
LSBPC	Leather Sector Business Promotion Council
M&E	Monitoring and evaluation
MOC	Ministry of Commerce
MOF	Ministry of Fisheries
MOU	Memorandum of Understanding
NGO	Non-government organization
PHH	Post-harvest handling
PL	Post-larvae (shrimp)
SME	Small and medium enterprise
STTA	Short-term technical assistance
TOT	Training of trainers
WFC	WorldFish Center

Executive Summary

During this quarter, October through December 2010, PRICE continued to build up on its activities in all three sectors – horticulture, aquaculture, and leather products.

In the horticulture sector this quarter the emphasis was largely on potato, which is the main crop during this season. PRICE continued to support potato seed growers, enterprises and companies, in addition to helping partners organize training for farmers on potato production and post production technology. To a lesser degree, eggplant production was also assisted, through support provided on seed access, inputs and technical advice. Mango starts blooming from the end of January, so PRICE supported farmers' trainings on proper care of the trees.

Also on the horticulture front, PRICE continued promoting the safe production of vegetables, as well as the production and promotion of vermi- and tricho-compost, and PRICE organized a workshop in the Jessore–Khulna region that successfully linked several of our partners to banks and other lending institutions.

As a result of PRICE interventions this quarter, the horticulture sector partners increased their sales by more than \$2.3 million, created 342 jobs across the value chain, and increased their investment in fixed assets by approximately \$5,900. In addition, a total of 1380 farmers were trained on improved technology.

In the case of aquaculture, because of the cold temperatures, October-December is off-season in traditional and household-based fish and shrimp farming. As such, emphasis was given during this period to management and workforce training, as well as access to better inputs and finance. PRICE continued assisting a private testing lab to build capacity to ensure increased supply of screened shrimp post larvae (PL) when most needed. PRICE helped six shrimp factories to train their management, technical and factory staff on code of conduct, biosecurity, personal hygiene, international food security standards, and compliance with labor rights and responsibilities. PRICE also disseminated its findings in the area of measures to avoid contamination in shrimp.

Project activities in the aqua sector led to additional sales of nearly \$13.2 million, the creation of over 2,700 jobs across the value chains, and about \$1.2 million in new investments.

The PRICE leather products team focused this quarter on workforce skill development, assistance to SMEs, and improvement of skins and hides through better flaying. Jointly with seven footwear and leather products companies, the project helped train around 1,400 new factory workers. PRICE provided assistance to SMEs in skill development, process upgradation and market linkages, and assisted 10 of them to prepare for participating in the Dhaka International Trade Fair, to be held in January 2011. Two industry associations, BFLFEA and BTA, along with Business Promotion Council, took the lead and organized this year's flaying campaign for the first time, with support from PRICE.

Leather sector partners increased their sales by \$2.8 million this quarter and 574 full time new jobs were created, while new investment increased by \$220,000. A total of 1400 workers were trained in workforce development programs.

In total, the sales of PRICE-assisted SMEs and farmers increased by \$18.4 million during the quarter, which is 30% of the annual target. As a result of PRICE interventions, almost 3,700 new jobs were created across the value chains, private sector investment grew by more than \$1.4 million, and 313 farmers and SMEs gained access to finance. PRICE emphasized a great deal on training, with more than 7,000 mostly horticulture and aquaculture farmers receiving assistance to improve their management practices, and over 6,000 receiving different types of technical training. Over 3,700 persons participated in workforce development programs during the period, most of them in the aquaculture and leather products sector.

PRICE PERFORMANCE Oct-Dec 2010		
INDICATOR	FY '11 TARGET	ACHIEVED
<i>Sales increased</i>	\$61.6 million	\$18.4 million
<i>New jobs created</i>	12,500	3,673
<i>Investment increased</i>	\$1.3 million	\$1.4 million
<i>Farmers/SMEs trained in technology</i>	26,300	6,296
<i>Farmers/SMEs trained in management</i>	14,700	7,050
<i>Farmers/SMEs got access to finance</i>	2,300	313
<i>Workforce development training</i>	7,000	3,735

QUARTERLY HIGHLIGHTS



- PRICE organized an access to finance workshop in the southwestern region that linked 13 agro-enterprises with 11 banks and other finance institutions. As a result, credits for Tk 2.6 million have already been awarded.
- With PRICE support, Bombay Sweets, one of the leading snacks companies in Bangladesh, started contract farming in Bogra with a recently introduced processing type of potato.
- PRICE helped the Rural Development Academy of Bogra organize a week long residential training course on Tissue Culture Technology for the production of virus-free seed.
- Nine carp and mono-sex tilapia hatcheries were supported to increase their capacity for quality grade seed production for the coming production seasons.
- Over 1,500 workers in Cox's Bazar – most of them women – were trained on the hygienic and safe manufacturing of dry fish.
- PRICE initiated in-country study trips for lower-technology level fish farmers to visit and learn from high productivity farmers.
- PRICE negotiated with two private banks to provide evening banking services to fish farmers in some rural areas for the betterment of their business transactions.
- PRICE extended its partnerships in the Cox's Bazar region by signing MOUs with two depots to assist growing shrimp following outgrowing schemes.
- PRICE supported a TOT program on good aquaculture practices at Cox' Bazar organized by FPBPC, Department of Fisheries and BFFEA. The program included the participation of USFDA specialists.
- PRICE partnered with six shrimp processing plants to train staff, technicians and factory workers on food safety, international standards, and labor rights and obligations under

	<p>Bangladesh Labor Law 2006.</p> <ul style="list-style-type: none"> • PRICE expanded its collaboration to train and provide jobs to hundreds of workers in the shoe industry, and this quarter added a leather goods manufacturer as its partner. • Ten SMEs received technical assistance, as well as support for publishing a joint catalogue, for their participation in the January 2011 Dhaka International Trade Fair. • Seven SMEs completed their training on improved costing, raw material manipulation, inventory management, and production process, achieving increased productivity. • Two industry associations were assisted to take ownership, along with the Leather Sector Business Promotion Council, of the November 2010 Eid-Ul-Azha flaying campaign. PRICE teamed with the Leaders of Influence program to educate 200 imams on the subject, and also supported the printing and distribution all over the country of 75,000 posters on the Dos and Don'ts of flaying.
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Horticulture

PRICE is working to improve domestic supply and realize export potential for three key crops: potato, eggplant, and mango. During this quarter PRICE worked with several SMEs, associations, and companies to strengthen the value chains of these specific crops in order to improve the economic conditions and livelihoods of poor farmers associated with production, post harvest handling and marketing of these crops.

During this quarter PRICE continued to support potato seed growers, enterprises and companies. In addition, PRICE helped partners organize trainings for farmers on potato production and post production technology, safe production of vegetables, and production and promotion of vermi- and tricho-compost. PRICE organized a workshop on access to finance for project partners in Jessore –Khulna which was attended by 11 banks and 13 partners and resulted in further dialogue and linkages between the two groups. These efforts are helping to create an enabling environment that will support the successful and productive transformation of the horticulture sector in Bangladesh.

October heralds the time of seasonal change. The weather starts switching from hot late monsoon to the onset of dry cooler climate which dictates farmers to get prepared for planting winter vegetables. However, this year there was unusually lot of rainfall during October- November period forcing farmers for delayed planting of potato and other crops and late harvesting of rice. The effect of climate change was pronouncedly felt by the farmers. In some areas farmers had to replant their potato due to heavy rainfall.

Since potato is the main crop of this season PRICE has put all of its efforts on potato crop and took a holistic approach to improve the productivity of the crop through designing specific interventions starting from lab to the field. The focus on eggplant got lesser attention due to the fact that farmers usually focus on cabbage, cauliflower, beans and tomatoes more than eggplant during the early part of the season. PRICE has helped the farmers to organize good seeds of eggplants and other crops, getting prepared for planting, linking with input sellers and facilitated access to technical advice.

Mango starts blooming from the end of January so farmers usually don't do anything during this time with the fruiting plant. However, PRICE has taken some initiative and provided training for the mango farmers so that they can get prepared to take care of the plants.

A. POTATO

Promoting certified seed production through contract farming

PRICE provided support to Konika Seed Company Limited to organize trainings for four groups (30 potato farmers each) of contract farmers, for a total of 120 farmers in November 2010. The training, "Improved Potato Seed Cultivation Technology through Contract Farming", was conducted by potato seed experts and held in both Bokundia and Loknathpur of Chuadanga. Konika Seed Company supplied 80,640 kg of disease-free seed, and provided fertilizer and other chemicals to the contracted farmers and newly trained farmers, in addition to financial support. Together, PRICE and Konika Seed Company are providing technical supervision during the production. 112 acres of land were brought under contract farming, of which 32 acres were planted with diamond variety and 80 acres were planted with cardinal variety of certified seeds, supplied by Konika. During this reporting period Konika Seed

Company was able to sell 695,980 kgs of seed potato and generate four permanent jobs and 2,036 part-time jobs (male: 1,510; female: 526).



PRICE provided hands-on training (yard meeting) during December 2010 to 200 seed contract farmers of GUKED in Shibganj, Shahjahanpur, and Bogra. These contract farmers will utilize 106 acres of land to produce seed potato of the diamond and cardinal varieties. GUKED provided support to its contract farmers for input procurement. Technical support was also provided to Ferdousi Biotech to organize seed contract farming involving 25 contract farmers in

13.33 acres in Joldhaka, Nilphamari. Seed and other inputs were provided for production of certified seeds of the diamond, cardinal and granola varieties. Similarly, another PRICE partner, Communic Agro Limited, has also organized contract farming on 76.66 acres of land in Birganj, Panchagarh.

PRICE has also established linkages between the Seed Certification Agency and its partners. These linkages will eventually lead to certification of the seeds produced by the partners.

Strengthening tissue culture laboratories for disease-free planting materials

PRICE has supported Rural Development Academy of Bogra, Ferdousi Biotech Ltd., and Technology for Rural Development to strengthen their tissue culture laboratory. There is a dearth of trained tissue culture technicians and many new companies lack expertise in running their tissue culture labs efficiently. To strengthen the labs, PRICE supported partner labs with trained tissue culture technicians to increase their efficiency to produce disease free plantlets of the laboratories, as well providing hands on training to new recruits. Moreover, training courses were organized for new recruits of the potato seed company to help develop a critical mass of trained technicians.

A week - long residential training course on Tissue Culture Technology was organized during the last week of October 2010 at the RDA campus. PRICE supported the initiative in order to increase the capacity of the companies and seed growers engaged in disease-free planting material production. The training course covered topics including methodology of plant biotechnology, hardening process, field transfer, and practical sessions to develop media and other procedures for production of tissue cultured material. Twenty participants, mostly technical personnel associated with seed potato production, attended the course. PRICE is also helping to develop a manual on tissue culture technology of potato for future use by the tissue culture labs.



PRICE partners successfully produced 710,000 disease free potato plantlets. Of that total, Rural Development Academy produced 130,000 plantlets; Ferdousi Biotech produced

200,000 plantlets; Potato Seed Growers Association of Rajshahi produced 3,00,000 plantlets; and Technology For Rural Development produced 80,000 plantlets.

Facilitating production of disease free breeder and pre-breeder seed

In its effort to improve the whole cycle of disease free tissue culture seed production, PRICE is presently working with several partners located in the north and south of the country, areas which focus on different parts of the production cycle. Production of disease free potato plantlets through strict control and testing for eliminating viruses is one of the prerequisites for obtaining disease free seeds. These seeds need special care once transferred to the field and need to be placed under protective net houses, so that no infection occurs until they move to the three stages of seed production technology. PRICE is supporting several potato seed enterprises that follow strict control measures for the production of disease-free seed production instead of a simple multiplication from certified seeds. During this reporting period, PRICE supported Sajib Seed, Communic Agro Limited, Technology for Rural Development, Ferdousi Biotech Ltd, Potato Seed Growers Association, Ankur Seeds, Konica Seed Company Ltd., and Unique seed to organize pre-breeder seed production from tissue cultured plantlets, and breeder and foundation seed production in the net houses, under the supervision of experts.

With PRICE technical support, Sajib Seed of Nilphamari established 1.65 acres of net houses for production of pre-breeder and breeder's seeds of diamond, cardinal, granola, and Asterix varieties. They obtained their planting material from RDA, Bogra. The enterprises that have their own tissue culture labs achieved the following: Ferdousi Biotech organized net houses for establishing plantlets and tuberlets of granola, cardinal, and diamond in 10 acres; TFRD in 5 acres; RDA in 3.26 acres; and Potato Seed Growers Association in 8.1 acres. Each net house was organized from the organizations own sources. Communic Agro planted tissue culture plantlets on 2.98 acres sourcing plantlets from Ferdous Biotech, Ankur. All the breeder and pre-breeder seed producers selected table potato varieties due to high demand for these varieties among the farmers. However, Sajib and Ferdous also planted processing types of potato acting upon advice from PRICE.

Ankur, Unique, and Konica put their effort into the production of certified seeds, while the others put their efforts in pre-breeder, breeder and foundation seed production.

Potato seed plot demonstration for technology dissemination

PRICE helped Konica Seed Company establish four potato seed demonstration plots with cardinal and diamond variety in association with the potato seed farmers of Loknathpur, Gokundia, Akundabaria of Chudanga, and Dahijuri of Jhenaidaha district. Seed sowing was completed during mid November and technical supervision was provided so that quality seeds were produced. Neighborhood farmers visit the plots regularly and demonstrate interest for sourcing seeds from the plots.

Although the high production of disease free, pre-breeder seed has recently gained popularity in the north on a small scale, no potato seed producers in the south had yet been exposed to the technology.

PRICE advised Konica Seed Company to undertake pre-breeder and breeder seed production and link it with Rural Development Academy, another PRICE partner organization. A technical expert from Konica was trained by RDA and with PRICE support, pre-breeder seeds from RDA were supplied to Konica. PRICE has helped Konica to establish the first ever net house in the south of the country for the production of disease free breeder seed. The crop condition was extremely good and farmers visit the net house regularly, creating a lot of interest among the seed producers of the south.



Promoting processing type of potato production for value addition

Value addition in potato is very negligible since potatoes are usually consumed when they are fresh. A seasonal glut is not uncommon, which forces farmers into distress selling. Several industries were developed a few years ago to produce potato flakes, starch and snacks but many of those factories are now closed because of the dearth of processing varieties and the absence of a proper contract farming system.

Bombay Sweets & Co. Ltd, one of the leading snack companies in Bangladesh, uses large amounts of potatoes for their processed products. However, they use table potatoes instead of potatoes made for processing since processing types are not available. Bombay Sweets is now planning to begin production of high quality crisps from potato, which require processing potatoes – not table potatoes. With PRICE support and in collaboration with two other PRICE partners in Bogra, GUKED and Murail Cooperative Association, Bombay Sweets started contract farming in Bogra with a processing type of potato – Asterix, involving 125 farmers who are cultivating potatoes on 81 acres of land. Bombay Sweets supplied Asterix seed potato to the farmers, while GUKED and Murail Cooperative Association provided other inputs and finance. Bombay Sweets will buy the processing type of potato for their factory from the farmers based upon a prefixed price. This type of approach in contract farming, involving input suppliers, commission agents and farmers associations, technical assistance for production and post production, financing support and pre-fixed buy back of the products by the industry is new in the country and if successful will lead the way for similar initiatives in the future. Bombay Sweets is planning to expand the production base once the system becomes successful.

Assisting in increasing the productivity of table potato

Potato is not widely cultivated in and around Khulna and the southern part of Jessore. If it were possible to expand potato production in the area, however, potato production would contribute to the income and food security of the resource poor farmers. PRICE signed MOUs with three new agro enterprises from the Jessore-Khulna region including Muktir Alo Agro Business, PRIDE Agro Enterprise, and Krishok Bandhob Karmosuchi. Through these MOUs PRICE helped organize smallholder farmers for potato farming and conducted eight training sessions for 600 potato contract farmers during November-December 2010. The training focused on modern cultivation methods of table potato cultivation. PRICE supported Muktir Alo Agro Business to organize three trainings on “Improved Potato Cultivation

Technology through Contract Farming” in November. The 90 farmers who attended the training planted potato on 16 acres of land with two table potato varieties (cardinal and diamond), while the enterprise assisted the table potato farmers with inputs. Technical supervision is being provided to the farmers by a field technician so they can get advice as needed.



farmers.

PRICE also supported PRIDE Agro Enterprise to organize trainings for 240 potato farmers of Jessore. The training, “Improved Technology on Potato Cultivation through Contract Farming,” was conducted in eight groups consisting of 30 farmers each at Kamalapur, Balighat, Natunhat, and Samospur of Jessore. The enterprise is organizing the farmers for contract farming of table potato (cardinal and diamond variety) on 160 acres of land and is also assisting with input supply and technical supervision. PRIDE Agro Enterprise plans to buy all the potato from the

Krishok Bandhob Karmasuchi, a new agro-enterprise of Jessore, trained 270 potato farmers in 9 groups consisting of 30 farmers in each batch. The training, “Modern Cultivation Technology on Potato Cultivation” was held at Jhikorgachha upazilla, Jessore in December, 2010. PRICE facilitated the training to increase potato productivity in the area by improving the knowledge and skills of the potato farmers in farming potatoes as well as assisting them to get the required inputs in a timely manner. Krishok Bandhob Karmasuchi contract farmers planted two varieties of potato – cardinal and diamond – on 500 acres of land and technical supervision is being provided by the enterprise for reaping a good harvest.

Golden Seed Processing Farm organized 60 contract farmers at Keshtopur Village of Jibon nagar Upazilla of Chudanga to farm one processing type of potato variety - asterix, and two table types - granola and diamont - on 30 acres of land. The enterprise procured certified seeds from BADC and supplied them to the farmers. The enterprise has also provided interest free seasonal credit for the production of potato, which will be adjusted during harvesting, and it will buy back all the potatoes at market price during harvest time. The enterprise is also cultivating potato on their 95 acres of leased land. PRICE is supporting the enterprise by providing hands on training to the contracted farmers and its staff and workforce on potato production technology.

PRICE and GUKED continued to support organized farming of table potato which involves 1,096 potato farmers who are cultivating potato on 698 acres of land. GUKED has started expansion of their activities to involve 1,576 more potato farmers who will be cultivating on 1,226 acres of land. GUKED is providing inputs and finance to their assisted farmers. Murail Cooperative Association is supporting their existing 230 farmers to farm potato on 76.5 acres of land and has added 369 more potato farmers as members to cultivate on 170 acres of land under their potato contract farming program. GUKED also sold 630 metric tons of their certified seed potato and 740 MT of table potato produced by the contract farming. These sales earned them Tk. 52.37 million. MRDMCSL sold 70 MT of their seed potato produced by their contract farmers earning them Tk. 1.25 million.

Facilitating market linkages for seed potato

PRICE assisted RDA in establishing a marketing network for selling their plantlet, pre-breeder and breeder seed, and foundation seeds. Through this network, RDA sold 132,440 plantlets, 4,232 kg pre-breeder seed, 15,068 kg breeder seed and 14,730 kg foundation seeds and earned revenue of Tk. 5.03million.

PRICE also supported Konica Seed Company in expanding its marketing network for which a dealer meeting was organized and held in Chuadanga on October 09, 2010. A total of 50 seed dealers from different districts were present in the meeting. KSCPL gave a presentation regarding the varieties available, quality of seeds, present stock position, and declared some incentives to be paid (besides prevailing commission) to the dealers who sell the highest quantity of seed potato. A Seed Certification Agency Officer explained the traits of good quality certified potato seed, the type and color of seed tag and requested the dealers to follow proper ethics to sell good quality seeds. KSPCL marketed seed potato to 23 districts of the country and successfully cleared the entire stock of seed potato.

B. MANGO

Increasing productivity of mango farmers

Ankur, a PRICE partner enterprise in the south west region of Bangladesh – Chuadanga - completed the first phase of training on “Improved Mango Orchard Management in October –November 2010.” Sixteen trainings were conducted. 30 farmers were reached through each training. 480 mango contract farmers from Ankur learned modern production methods including planting material selection, planting time and techniques, fertilization and irrigation, pest and disease management, harvesting and post-harvest handling, and marketing. Both theoretical and practical sessions were blended in a way that farmers could listen, see, and practice the techniques. Local mango experts identified by PRICE conducted the training. The trainees were provided with training materials, prepared by the PRICE sector team in collaboration with the technical experts and scientists, which included daily lecture sheets with salient points of the day’s training.



The enterprise, in collaboration with PRICE, is providing regular advice to the farmers on timely weeding, mulching, fertilization, and irrigation.

C. CROSS CUTTING ISSUES

Producing safe vegetables

Organix, a PRICE partner, trained 114 male and 66 female contract farmers on safe winter vegetable production and on the contract farming approach in November – December 2010. During the three-day training, conducted in Daulatpur, Teligati, Mirzapur, and Panchu, farmers were given learning materials and practical and theoretical sessions were conducted on the benefits of using better seeds, clean cultivation techniques, solarization, organic compost, mechanical and biological control method of pests control, vigilance and use of

different kinds of plant extracts for disease management, harvesting, and post-harvest handling. Farmers were also trained on bookkeeping for the contract farming approach and marketing. PRICE helped the enterprise maintain its registers (training, inputs supply, stock, and sales).

The trained farmers produced safe vegetables such as cauliflower, cabbage, tomatoes and eggplant on their 75 acres of land under the supervision of technical experts. Farmers were provided with financial assistance and technical supervisory support during farming. The enterprise supplied 5,425 kg of compost as an alternative to chemical fertilizer, and 132 litres of Mehogoni oil and Pheromone Traps to the contract farmers for controlling vegetable pests. Organix is marketing the vegetables through its contracted wholesale outlet.



During this reporting quarter Organix was able to sell 195,175 kgs of safe vegetables through sourcing directly. Their farmers marketed 242,050 kgs of safe vegetables through the market linkages established by the enterprise. The total revenue during the period was Tk. 5,477,025. Their efforts generated casual employment for 660 people (male: 462 and female: 198) and the enterprise increased their variable investments in the amount of Tk.378,700.

EFADF, a PRICE partner in Khulna, is also promoting safe vegetable production and marketing through organizing and supporting resource poor marginal farmers. EFADF is working with 500 farmers who, during the winter season, farmed 125 acres of land and grew country bean, cauliflower, tomato and cabbage. The enterprise provided hands on training on safe vegetable production technology to the farmers through the technical supervisors, supplied 30,500 kg compost fertilizer to the farmers for the production of vegetables and obtained high quality seeds from Lalteer and other reputable seed companies. Farmers have already started harvesting their produce and marketing it to the Sharankhola and Dhaka markets through EFADF. During this reporting quarter, EFADF Agro Business sold 338,962 kg of safe vegetables sourced from their contract farmers directly and their farmers marketed 323,978 kg of safe vegetables through EFADF's marketing network. The total sales revenue earned was Tk.9,862,461. The activities generated 450 opportunities for casual employment (male: 270 and female: 180) in the enterprise. Investment during the period was Tk.926,138 (inputs Tk.674,238; staff salary Tk.125,100; operation cost Tk.41,900; and casual labor payment Tk.84,900).



Sustainable vegetable production through compost promotion

PRICE assisted GKSS Enterprise in reaching 960 farmers through a training and yard meeting during the last quarter on the use of organic fertilizer and compost for sustainable vegetable production with higher returns. The training continued up to 9 October 2010. During this quarter, farmers produced eggplant, country bean, cucumber, okra, and green chili by using organic fertilizer and compost and tricho extract as a plant disease protecting agent. By doing so they achieved higher crop yields and contributed to the overall soil health through a sustainable production method. The productivity of the crops increased by 20- 30 % due to the adoption of modern cultivation techniques, clean cultivation approach, use of organic fertilizers and natural disease protection agent. Through PRICE, GKSSE organized additional hands-on training, yard meetings, and marketed the products through the dealer's network and directly to the farmers. GKSSE produced 125.08 MT of Tricho and Vermi compost during this quarter. They sold 110 .7 MT of their products through the dealer network and directly supplied it to their 960 farmers. GKSSE also produced 13,090 tricho derma extracts and sold 3,920 litres to their farmers. The company earned total revenue of Tk.1.87 million from selling their compost products.

PRICE also assisted Riya fertilizer of Sirajganj to produce vermi compost, establishing linkages with BARI for the development of tricho compost production technology, and the development of a marketing network. Riya Fertilizer is planning to set up a demonstration plot, field day, and a group meeting targeting 1,000 eggplant and other high value horticultural crop growers in Sirajganj area.

Promoting good quality seeds

PRICE supported M/s Padma Seeds to develop its capacity in management, particularly maintaining a farmer database, training register, inputs supply register, stock register, sales register, and the enterprise collected different types of vegetable seeds from their trained contract farmers while also supplying certified seeds to the trained contract farmers for growing quality seeds. and establishing contract agreements between the farmers and Padma Seeds. PRICE assisted Lalteer Seed Company to organize a seed dealer's workshop at Coxs Bazar, attended by 31 seed dealers on 29 November 2010.



A technical session was conducted on the importance of good quality seed, business ethics, and other relevant topics. Seed dealers stated that the PRICE supported training helped increase their technical knowledge on crop production and seeds and they are regularly organizing farmer meeting on the importance of good quality seed to create awareness among the farmers. Each dealer on an average provides service to about 500 farmers. The dealers requested regular training for them and support to help them establish a demonstration plot

and field days.

During the quarter M/s Padma Seeds was able to sell 3,790 kg of vegetable seeds amounting Tk. 563,000, generated 80 opportunities for casual employment (male: 40 and female: 40) in the enterprise. Their increased investment for the period was Tk. 242, 600.

Linking banks with agro-enterprises

PRICE has been supporting thousands of small horticulture farmers, the majority of whom own less than half an acre of land. For the last two years PRICE has helped these farmers to improve their skills and knowledge of increasing productivity, improve post harvest handling, and mitigate other constraints such as access to inputs and finance through several agro-enterprises and associations. Access to formal sources is still difficult for the small agro enterprises and small holder horticultural farmers. This segment is often termed as the “missing middle” and is not served by banks or microfinance institutions.



To help combat this, PRICE organized an access to finance workshop on December 14, 2010 to help about 4,000 horticulture farmers of the southwestern region. This workshop included 13 agro-enterprises working with PRICE and 11 banks with different types of SME products.

The workshop, held in Jessore, aimed to establish linkages between PRICE's horticulture - based SMEs (small and medium enterprise) and financing institutions operating in the region. Participating enterprises included EFADF Agro Enterprise, Organix, Muktir Alo, Uttaran, Krishok Bondhu Karmashuchi, PRIDE Agro, Ankur, Konika Seed, Biotech Agro Complex, Proshikkhito Jubo Kalyan Sangstha, DIPTI, Adarsha Foundation and Bhorer Alo Samabay Samitee.

Representatives from National Bank, BASIC Bank, Bangladesh Krishi Bank, Standard Chartered Bank, Janata Bank, Islami Bank, NCC Bank, The City Bank, Prime Bank, Eastern Bank and Dutch-Bangla Bank were present in the workshop and gave presentations about the different products of their respective banks that cater to the agro-based industry. They also shared their experiences in dealing with SME borrowers. Enterprises and financial institutions exchanged their views and explored possible ways to expedite specialized financing. SMEs urged the bankers to make access to finance easier which they consider essential for accelerating the growth of horticulture sector.

In the second part of the workshop, one- to- one interaction between the participants led to more constructive outcomes. Participating SMEs interacted with their chosen banks and explained their needs, to which the banks were responsive. The PRICE Horticulture Team leader facilitated the one – to - one interaction and explained the role and commitment of PRICE and that of the partner organizations, the kind of support provided and about regular monitoring system. This helped to build trust and strengthen relationships between the SMEs and the banks. Several formal contacts and linkages were formed. All the Banks except Dutch Bangla invited PRICE representatives to their office for further discussion. By December 2010, EFADF received Tk. 2.1 million as credit while Organix received Tk. 500,000.

D. QUANTITATIVE RESULTS

Through December 2010, as a result of PRICE interventions, horticulture sector partners have increased their sales by more than \$8.8 million (of which \$2.3 million was achieved in Oct-Dec 2010); created 3,059 new jobs across the value chains (of which 342 were created in Oct-Dec 2010), and increased investments in fixed assets by \$499,414. PRICE has provided training on improved technology and management training to 8,404 horticulture farmers, and has helped 1,037 farmers obtain access to finance so far.

Results in Horticulture during Oct-Dec 2010	
Sales increased	\$2.3 million
New jobs	342
Investment increased	\$5,900
Farmers trained in technology	1,130
Farmers trained in management	250

Partner-Wise Results in Horticulture: Oct-Dec 2010

Partners	Sales Increased (USD)			No. of Jobs Created*			Investment Increased (USD)
	Domestic	Export	Total	Male	Female	Total	
GUKED	424,120	-	424,120	162	16	178	1,283
GKSSE	53,634	-	53,634	69	13	82	4,614
Murail Rural Association	18,151	-	18,151	2	-	2	-
Konika Seed	227,919	-	227,919	12	4	16	-
Padma Seeds	4,681	-	4,681	-	0	0	-
Organix	79,377	-	79,377	3	1	4	-
Lal Teer Seeds	362,319	-	362,319	3	1	5	-
EFADF Agro Business	142,934	-	142,934	15	2	17	-
Golden Harvest Processing	532,177	439,185	971,362	29	9	38	-
RDA	30,535	-	30,535	1	-	1	-
Total	1,875,847	439,185	2,315,032	296	46	342	5,897

*Jobs are calculated using job model to estimate the across the value chain results of job creation.

Source of data: Partner interviews

Aquaculture

The aquaculture sector plays a major role in fighting hidden hunger related to malnutrition that arises from a shortage of animal protein consumption in the country. The sector also helps to alleviate poverty by creating jobs and self-employment. Shrimp and fish are the two major components of aquaculture in the country, and they both have great potential for growth: fish for domestic consumption and shrimp/prawn for export.

Brackish water shrimp farming is done in the coastal belts and fish is usually farmed in closed water bodies throughout the country. Freshwater prawn overlaps shrimp and fish farming areas. Bangladesh attained self-sufficiency in seed production of fish and shrimp but lags behind in prawn seed production in hatcheries.

One of PRICE's main focuses has been to increase productivity by promoting good aquaculture practices that allow for higher stocking densities and yields without increasing disease and mortality rates. October -December is off-season in traditional, improved and household based farming, so emphasis was given to management and workforce training. The project also continued facilitating access to better inputs and finance, and assisted the shrimp industry to achieve compliance with export markets in food safety issues during this quarter.

The approximate cumulative figure of fish and shrimp farmers trained on improved farming technology reached to 31,826 (5,166 this quarter). At the end of Dec 2010 those trained on improved management reached 12,135 (6,800 in the quarter) and training of workers reached 3,457 (2,315 in this quarter).

PRICE Achievements in Aquaculture during Oct-Dec 2010	
<i>Sales increased</i>	\$13.2 million
<i>New jobs</i>	2,757
<i>Investment increased</i>	\$1.2 million
<i>Farmers trained in technology</i>	5,166
<i>Farmers trained in management</i>	6,800
<i>Training for workforce development</i>	2,315
<i>Farmers received micro credit</i>	310

The project also continued facilitating access to better inputs and finance, and assisted the shrimp industry to achieve compliance with export markets in food safety issues during this quarter. Through December 2010, PRICE activities in aquaculture have led to more than \$51 million in additional sales, 10,042 new jobs across the value chains, and \$2.7 million in new investments.

A. FISH

Across the country, PRICE collaborations during the reporting period increased to a total of 40 partners: 18 farming associations, nine farming groups within NGOs, 11 hatchery cum farming groups, one seed traders association, one input seller company, one processing factory, and one association for dry fish. The project has linked farmers to quality seed-producing hatcheries and nurseries, and has trained farmers on farm management for different fish species, from pond preparation to harvest and marketing. PRICE has provided technical assistance to 2,910 farmers during this quarter which resulted in approximately 17,363 fish farmers, including 5,433 women (807 this quarter). Since this quarter is off-season for micro, small and medium farmers who do not practice perennial farming, most management and workforce development related trainings were conducted in the reporting period. In this quarter, PRICE signed MOUs with three new partners: one enterprise based

group predominantly made up of women, CF; one cage farming association, BCOA; and a mono-sex hatchery and associated farming groups, NTH). Another three MOUs are close to being finalized.

Increased Nursing of Over-wintered Seeds



Our partners DMBBS and KMPUSS expanded their commercial operation of over-wintered (OW) seed production during this quarter. In addition to the two seed traders' and nursery operator's associations, TSMS, MFBA, BMCS, PFPFA TMCS, AMBS, SMCS and SSURD associated farmers significantly increased their OW nursing. They did this to use it in their own farms for the early 2011 crop and to sell to other farmers elsewhere. With training and counseling assistance from PRICE on overwintering nursing of certain hardy and

high demand fish species, most of the farmers associated with the above mentioned organizations began off-season commercial production of OW seeds during this quarter. In this reporting period, they have done mass-scale production of OW fish seeds for carp, local catfish, stinging catfish, climbing perch and pangas. In particular, DMBBS and KMPUSS are also promoting the OW fingerlings to farmers throughout Bangladesh.

Support to Partner Hatcheries to Produce Quality Grade Seeds

During this reporting period, PRICE supported increasing the capacity of nine carp and mono-sex tilapia hatcheries on brood management at their in-house brood banks so that quality grade seed production could be ensured during the next seed production season. Infrastructure modifications and renovations were also suggested to the hatchery owners by PRICE. Follow-up assistance to farming groups aligned with the hatcheries in out-growing schemes were also provided during this period. The performance of some hatcheries' maintenance of brood banks, seed production and, over-wintered nursing has been so outstanding so that USAID and a US Embassy team selected one of the partner hatcheries to be visited by the US Ambassador to Bangladesh during American Week 2011.

Linking Nurseries to Sources of Inbreed-free/Quality Grade Fish Seed

Based on the findings of the study to identify hatcheries producing inbreed-free fish seeds (fertilized fish eggs), and the recommendations suggested in the report to link organized farming groups to these sources of inbreed free seeds, PRICE assisted farming groups, in particular conventional and over-wintered nurseries, and linked fish seed traders to the identified hatcheries. The information on 18 identified hatcheries in the four districts indicated in the report (Jessore - 5, Bogra - 4, Comilla - 4 and Mymensingh - 5) shows that they produce comparatively better quality fish seeds. This information was informally communicated to the partner nurseries, lead farmers, and fish seed traders in response to USAID's policy to not to promote or demote a particular business enterprise.

Introduction and Popularization of New Farm Species

PRICE began an initiative to substitute relatively more profitable farmed species for less profitable ones so that aquaculture could become sustainable in the long run and supply demand-based products at the consumer level. In Bangladesh, roughly 50% of the country-wide households do not have access to electricity, and thus, have no refrigeration system. Bangladeshi people also prefer air breathing fish species that can be kept alive in a house for days, even weeks with little water in a small container without food or aeration as food fish.



PRICE actively works with five farming associations, one nursery and one fish seed traders' association to introduce and popularize farming of climbing perch and stinging catfish as a profitable air-breathing species among farmers.

Promoting Better Farming Practices

During this reporting period the project supported the training of 2,910 fish-farmers (including 807 female) on improved and integrated farming technologies. PRICE conducted improved farming training sessions for farmers of different categories; from NGO associated marginal and micro or small resource poor farming (RPF) families to commercial high density or semi-intensive culture systems based farmers. The largest group assembled at SSS (14 trainings, with 710 all women members), followed by AAS (eight trainings, 400 all male trainees). Other significant training programs arranged by partners included TMUS, for 350 farmers (a few females) during October to December 2010; Kahaloo Matsya Puna Utpadankari Samoby Samity (KMUS), for 200 male farmers in the same time.

Improving Farmers' Backward Linkages in Quality Grade Feed

During this quarter, PRICE linked feed mills in Mymensingh areas to fish farmer associations to provide them with quality grade feeds (both sinking and floating) to prevent water pollution and wastage in high density farming. The Tarakanda and Muktagacha association farmers now purchase quality grade sinking and floating feeds individually or collectively. As a result, their production costs, wastage and water pollution level is decreasing.



Improving Management Skills of Farmers

The project helped to train 6,800 fish-farmers on improved farm management, including group procurement of inputs necessary for farming and group marketing of the produces, cost benefit analysis, and documentation. The RDF trained 1,500 farmers including 421 females, SSURD trained 1,000 farmers including 129 females, TMUS trained 700

farmers including 65 females, AAS trained 500 male farmers, PMH trained 300 farmers including 55 females, SMH trained 300 farmers including 37 and MFBA trained 300 male farmers. In addition, 14 other partners organized management trainings for their beneficiary farmers ranging from 100 to 250 trainees. All the training session were conducted during October to December 2010.

Facilitating Processing Compliance for the Export Market

Assistance to Golden Harvest Seafood and Fish Processing Ltd during this quarter continued in the area of building the capacity of its laboratory staff on chemical, biological, and organoleptic tests for export fish and fish products. The partner reportedly shifted to produce value-added fish products both for local and export markets in the future instead of processing whole fish only for export. In addition, training for factory workers on bio-security and personal hygiene in the processing plant continued and all workers of the processing plant, who work with fish and horticulture sectors were trained.

In-Country Study Trips

During this quarter, PRICE initiated in-country study trips among PRICE cross-partner sites so that relatively lower producing partners could visit higher producing partners to observe their farming techniques. The first group to take part in the cross-partner study trip during this quarter was Rakhain Development Foundation (RDF) of Barguna from 18 to 21 December 2010. Farmers from this association visited relatively high yielding fish farms in Mymensingh areas and expressed their surprise at observing farms that produce three to four times more than that of the RDF farmers with identical unit areas. Participants realized that they are far behind in productivity and species diversification. It is hoped that RDF farmers will follow the methods of their counter parts in Mymensingh in the near future. In coming days other partners will participate in-country study trips.

Increased Skilled Workforce in Hygienic Dry Fish Manufacturing

This quarter begins as the driest period of the year, which is best for the production of safe and hygienic dry fish by PRICE's partner, the Nazirertek Fish-Dryer's Multipurpose Cooperative (NPMC) in Cox's Bazar. The technical assistance provided through training and counseling to dry fish yard owners was completed earlier and in this quarter workers were trained to assist hygienically safe dry fish manufacturing to avoid contamination with filth and microbes.

The training also included bio-security, cross-contamination and personal hygiene while handling raw materials. The products from NPMC are mainly destined for the domestic market, with the option to export to ethnic markets abroad. Demonstration of high quality dry fish production without use of unlawful chemicals was also demonstrated. During the reporting period, 30 training programs for workers were completed and a total of 1,500 workers were trained, of which 1200 were female.



Farmers' Access to Evening Banking

Banking facilities have reached to most of the rural areas in the country. However, evening banking hours in Bangladesh is limited to a few urban areas. Organized fish farmers in Mymensingh areas usually sell their bulk produce in the afternoon to the accumulators to facilitate night transport to towns and cities so that farmed fish can be sold at the wholesale markets in the early morning. The monetary transition between farmers and buyers is done in the afternoon and evening. Farmers therefore need evening bank hours to deposit the cash in their local areas. To address this need, PRICE negotiated with two banks in the private sector to provide evening banking services so that all consumers, including fish farmers, in the area can get their services. At least one bank is expected to start evening banking operation in the area soon.

Market Study

PRICE is carrying out a fish market study and a major part of the investigation was completed during the reporting period. The draft report is expected to be submitted in next quarter. The study focuses on two commercially farmed species, namely pangas (Mekong river catfish) and tilapia (mainly genetically improved farmed Tilapia, [GIFT] and mono-sex tilapia). The study was conducted because no market study has been carried out in Bangladesh on farmed fish, its current status and future potential as a provider of low cost animal protein to the masses, and the high prospect of organized farming and sustainability in the long run. It is also important to get an up-to-date analysis of the current market situation in the country and the rapid changes occurring in the market as a result of increased population, food habit diversification, and rapid urbanization that creates slum dwellers of low income groups in cities and towns. Cities and towns must be fed and pressure is increasing in rural areas to supply more and more food. Relatively high income groups and the middle class in the cities and towns are capable of buying different types of animal protein, however poor families rely on low cost fish as their main source of animal protein and dietary animal lipid supplies. The main objectives of the study are to determine the current status and trends in the supply and demand of the two important farmed fish species in Bangladesh; assess the impact of farming of two species, production and supply chain, input manufacturing and supplies; examine the prospect of export and value added product development; look at projected future trends; and, assess the implications of the findings to the aquaculture and fisheries sector in the country.

B. QUANTITATIVE RESULTS IN FISH AQUACULTURE

PRICE has provided technical assistance to 2,910 farmers during this quarter that result in a cumulative figure of fish farmers of approximately 17,363, including 5,433 women (807 this quarter). Partners in fish subsector have increased their sales by \$ 9 million in this quarter to reach a cumulative \$34 million till December 2010. More than \$276 thousand was invested in the period.

Achievements in Fish during Oct-Dec 2010	
<i>Sales increased</i>	\$9 million
<i>New jobs</i>	(179)
<i>Investment increased</i>	\$276,326
<i>Farmers trained in technology</i>	2,910
<i>Farmers trained in management</i>	6,800
<i>Farmers received micro credit</i>	310
<i>Training for workforce development</i>	1,660

Partner-Wise Results in Fish: Oct-Dec 2010

Partner	Sales Increased (USD)			No. of Jobs Created*			Investment Increased (USD)
	Domestic	Export	Total	Male	Female	Total	
DMBBS Association	222,378	0	222,378	-3	0	-3	49
PFPFA Association	-119,393	0	-119,393	-30	0	-30	5,275
TFFS Asso.-1 st phase	-1,182,741	0	-1,182,741	-434	-1	-435	0
TFFS Asso.-2 nd phase	-1,429,790	0	-1,429,790	-130	0	-130	5,990
Nokla Cooperative	111,783	0	111,783	6	0	6	0
Bamunji Cooperative	55,203	0	55,203	4	0	4	0
Muktagacha Fish Farmers' Asso	-467,761	0	-467,761	36	0	36	4,348
Unnayan Sangha	25,270	0	25,270	-2	0	-2	0
TMUS-1	620,382	0	620,382	223	17	240	9,238
TMUS-2	448,213	0	448,213	-134	0	-134	7,708
Kahaloo Association	626,620	0	626,620	299	2	300	15,778
Pachpir Association	70,285	0	70,285	22	0	22	4,272
Murail Association	260,007	0	260,007	71	1	72	3,087
Society For Sustainable Development for The Rural and Urban Area	4,536,595	0	4,536,595	128	5	133	35,583
North Bengal Thaitech Tilapia Hatchery	74,732	0	74,732	-11	0	-11	4,411
Agriculture Advisory Society	50,838	0	50,838	9	0	9	9,815
RDF-1	164,522	0	164,522	17	2	19	11,824
RDF-2	818,041	0	818,041	-5	0	-5	75,703
Barisal Aquaculture Development Society (BADs)	34,819	0	34,819	-9	0	-9	4,539
SSS-1	68,176	0	68,176	-17	0	-17	0
SSS-2	98,730	0	98,730	-11	0	-11	0
Jonoseba Kendra	-13,377	0	-13,377	5	1	6	870
Nazirertek Fish-dryer's Multipurpose Co-operatives-Society	1,311,392	0	1,311,392	-437	-51	-488	6,609
Allawalla Hatchery & Farming Complex	94,799	0	94,799	23	0	23	5,758
Samridhi Bhomuki Matsya O Unnyan Gobeshona Kendro	42,680	0	42,680	22	0	22	2,739
Mulia Matshyajibi Samittee	349,899	0	349,899	13	0	13	7,374
Gondhamari Motshygibi Samabaya Somiti	273,031	0	273,031	16	1	17	14,949
South Bay (Pte) Ltd	58,060	0	58,060	-22	0	-22	888

Nawapara Fisheries Complex	304,413	0	304,413	52	11	63	6,274
Ma Fatema Fish Hatchery	256,161	0	256,161	71	0	70	8,671
Pori Matshya Hatchery (PMH)	167,011	0	167,011	22	0	22	7,362
Rupali Fish Hatchery	172,952	0	172,952	5	0	5	8,700
Shuvra Matshya Hatchery	39,760	0	39,760	14	0	14	3,440
Din Bijoy Enterprise	3,913	0	3,913	0	0	0	0
Vairob Fish Agency	14,692	0	14,692	0	0	0	0
Razu Enterprise	11,536	0	11,536	0	0	0	0
Modina Fish	3,768	0	3,768	0	0	0	0
Mondal Fish	9,566	0	9,566	0	0	0	0
Satata Fish	1,928	0	1,928	0	0	0	0
Golden Harvest Seafood and Fish Processing Ltd.	0	361,380	361,380	14	3	17	0
Fishtech (BD) Limited	124,783		124,783	4	0	4	5,072
Satkhira Feed	323,022		323,022	0	0	0	0
Total Fish	8,636,895	361,380	8,998,276	-170	-9	-179	276,326

*Jobs are calculated using job model to estimate the across the value chain results of job creation.

Source of data: Small sample surveys for farmer groups and partner interviews for enterprises

Notes: For job creation, some partners faced negative changes compared to the same quarter in baseline year which made the total performance of job creation in fish subsector negative. However, considering the agricultural seasons highly dependent on various uncontrollable issues like climate etc. and the reporting season consisting only a part of a whole aquaculture season, any comment on this negative performance is yet to be made. PRICE holds the same opinion for the negative change in sales for some partners.

C. SHRIMP

Like fish, shrimp especially *bagda* (salt water shrimp) is not distributed across the country. Its distribution and farming is limited to greater Khulna and Cox's Bazar districts. PRICE's previous collaborations in shrimp were limited to greater Khulna region and during this period PRICE extended its partnership to Cox's Bazar region by signing MOUs with two depots to assist growing shrimp following outgrowing schemes. Also, PRICE signed an MOU with a semi-intensive farm in Khulna and extended the scope of work with another old semi-intensive partner farm involved in screened PL production and farming. Low productivity is the main problem in the shrimp sector, and increasing stocking density while preventing disease outbreak is the key to increasing yields and export earnings. In order to avoid export bans, the industry also needs to avoid contamination, the malpractice of incorporating additives in shrimp to increase weight, implement traceability, and observe compliance with Bangladeshi labor law.

The reported period is considered as off-season for shrimp farming. However, to ensure supply of disease-free and traceable PL, PRICE continued assisting a private testing lab to build its capacity to ensure increased supply of screened post larvae (PL) when most needed. Apart from supporting increased production, PRICE also worked with the processing plants for compliance to labor laws and biosecurity measures, and building capacity of their managerial and processing staff during the period.

Through its GHERS initiative, subcontracted to the World Fish Center, PRICE promoted improved farming practices and a market for virus-free, screened PL. 17 depot owners in Bagerhat, Satkhira, and Khulna received assistance to organize thousands of farmers under contract farming systems and all the farmers trained earlier were provided follow-up trainings on farming. In addition, roughly 12,000 additional shrimp farmers are tentatively selected during the reported period to be trained on improved farm management and production techniques under the GHERS initiatives.

During this quarter PRICE assisted six shrimp factories to train their management, technical and factory staff on code of conduct; biosecurity, personal hygiene, HACCP, SOP, SSOP, VAPD and compliance labor rights and responsibilities. 505 factory workers and 150 office and higher management staffs of the processing plants were trained during October – November 2010. As part of its collaboration with the GOB's National Action Plan to combat antibiotic contamination in farmed prawn, PRICE disseminated the findings of an experiment jointly conducted with DoF and BFRI to identify the probable sources of nitrofurantoin contamination and seek ways to remove it to a small group of experts and policy makers during this quarter.

In this period, shrimp subsector partners increased their sales by about \$4.2 million, invested more than \$935,000 and created around 2,936 jobs.

GHERS Initiative

The GHERS initiative aims to increase shrimp farming productivity and enhance quality by introducing improved farming practices. During this period, extension specialists and extension facilitators increased their effort to form an additional 12,000 farmers in groups to be trained in 2011 in old and new geographic areas under GHERS. The training of additional farmers will be conducted in three distinct categories; Closed System Pond Technology

(CST), which is the most capital intensive and allows for relatively high density farming; the Modified Traditional Technology (MTT), which introduces some new practices and requires a small investment but upgraded management within the reach of farmers; and Traditional Best Management Practices (TBMP), no additional investment is required but farmers simply follow easily adaptable management practices. The training programs for new farmers are scheduled to begin from early January 2011 together with follow-up training/counseling for previous farming groups. Based on the success of the initiative, USAID and Embassy officials preliminarily selected a TBMP site for visit by the US Ambassador to Bangladesh during American Week in January 2011.

High Density Shrimp Farming

Semi-intensive shrimp farming in Bangladesh collapsed in 1997 due to an outbreak of White Spot Syndrome Virus (WSSV). The crush was severe and only two farms returned to large scale semi-intensive shrimp farming under modified form. PRICE has developed a partnership with the largest semi-intensive farm (Gazi Fish Ltd, GFL) in the country and during this quarter signed an MOU for the second time with GFL to increase vertical production in farming and assist their in-house hatchery to produce and sell more screened PL. PRICE also signed a partnership agreement with the other semi-intensive farm (S&M Shrimp Culture Ltd, SMSC) during this quarter. PRICE is propagating the CST farming under GHERS. PRICE is planning to arrange study trips to GFL and SMSC for farmers who are interested to initiate more CST or semi-intensive type farming in future.

Preparation for Screening of Virus-Negative Post Larvae

PRICE-WFC continued to assist the private testing facility of Pranti, Polymerase Chain Reaction (PCR) Laboratory in Cox's Bazaar to test shrimp seed production cycles so that virus-negative strains could be identified and traced. The tested PLs are mainly used by GHERS and other shrimp related aquaculture partners in the country. During this quarter all preparations were made in Pranti so that testing of black tiger brood, *nauplii* and PL could be starting in January 2011, resulting in the popularity of screened PL becoming widespread.



Use of Improved Feed

Poor-quality supplemental feed decreases productivity, increases pollution, deteriorates soil and water health, makes health management of farming animal difficult and lowers feed conversion ratio (FCR) both in fish and shrimp. PRICE is addressing this issue by promoting improved feed and its use among shrimp farmers. During the reporting period the project worked with one feed mill in the Khulna area, Satkhira Feed Mill, and negotiated with another feed mill, SMS Feeds Limited in Mymensingh area to cooperate on the production and marketing of quality grade aquaculture feed both for fish and shrimp.

Improving Farmers' Backward Linkages in Seed

PRICE linked hatcheries in and around Cox's Bazar to shrimp farmer groups to provide quality grade seeds (PL). Most of the *bagda* hatcheries are located at Cox's Bazar (53 out of 58) area and the largest part (75%) of the farming is in Khulna region. Surprisingly, many farmers in Cox's Bazar use wild PL. During this quarter PRICE signed partnerships with two *bagda* farming groups under depots, YFL (Yunus Fishing Ltd) and IFL (Islamic Fishery Ltd) to farm *bagda* following an outgrowing scheme. The two farming groups will collectively procure hatchery-produced and screened PL for use in cultivation.

Supporting Group Procurement and Sales

As a routine procedure in the project, PRICE educated farmers on the benefits of group sales, and facilitated these through contract growing efforts and GHERS, as farmers often sell their products individually to buyers, limiting revenue. To buy inputs from the market, the project taught farmers to use group procurement methods, which helped them purchase high-quality inputs at lower prices. Farmers were also linked to the source of good quality inputs, like screened PL and hatchery PL, for traceable production.

Improving Access to Finance

Bagda farmers in the country usually get credit in the form of a promise to barter goods. Due to the scarcity of raw material for processing plants, suppliers partially finance poor farmers with seeds, feed, lime, fertilizer, and occasionally "soft loans", on the condition that farmers will pay them back in return of selling shrimp to them. Applying this tradition of informal value chain financing, PRICE convinced depot owners to finance the cost of farmer's inputs in shrimp production (feed, seed and fertilizer) through the contract growing systems.

GAP Training on Responsible Shrimp Farming



PRICE together with Business Promotion Council (BPC), a public-private partnership, facilitated a TOT program on good aquaculture practices at Cox' Bazar from 5 -9 December 2010. The program was conducted by the DOF, the Bangladesh Shrimp and Fish Foundation (BSFF) and the Bangladesh Frozen Food Exporter Association (BFFEA). The program's goal was to develop a team of core trainers who will be able to train other related stakeholders on good aquaculture practices in coming days. A team of professionals from the US Food and Drug

Administration and the Joint Institute of Food Safety and Nutrition of the University of Maryland trained 45 trainees from different organizations (universities, DOF and other value chain actors) in Bangladesh.

Compliance for Bio-security and other Food Safety Measures in Processing Plants

PRICE partnered with six processing plants, two in Jessore and four in Khulna, in the shrimp sub-sector to provide technical assistance on workforce development training covering bio-



security measures required in processing operations, personal hygiene, HACCP, SOP, SSOP, good manufacturing practices, and value added product development. In addition, the management training programs incorporated general office as well as factory personnel in all six processing plants. During October-December 2010, PRICE assisted in the training of 150 office and higher factory staffs on management and 505 factory workers and technicians on workforce development, together with awareness creation among workers and staff on the

rights and obligations of all under Bangladesh Labor Law 2006.

Workshop on Measures to Avoid Contamination in Shrimp

During this quarter, PRICE disseminated findings of experiments jointly conducted with public sector organizations (BFRI and DoF) through a half day workshop organized on 1 December 2010, to a limited group of experts and policy makers on the probable source of antibiotic contamination and ways to remove it. The findings were earlier submitted to Ministry of Fisheries and Livestock, Government of Bangladesh.



D. QUANTITATIVE RESULTS IN SHRIMP AQUACULTURE

Achievements in Shrimp during Oct-Dec 2010	
Sales increased	\$4.2 million
New jobs	2,936
Investment increased	\$935,419
Farmers trained in technology	2,256
Trainee for workforce development	655

In the period, shrimp subsector partners increased their sales by about \$4.2 million to reach at a cumulative figure of \$17.3 million, invested more than \$935,000 and created around 2,936 jobs across the value chains.

Partner-Wise Results in Shrimp: Oct-Dec 2010

Partners	Sales Increased (USD)			No. of Jobs Created*			Investment Increased (USD)
	Domestic	Export	Total	Male	Female	Total	
Gazi Fish Culture Ltd.	0	789,855	789,855	24	22	47	10,145
Din Bijoy Enterprise	1,304	20,870	22,174	1	1	2	0
Vairob Fish Agency	2,099	25,186	27,285	0	-2	-3	0
Razu Enterprise	1,923	24,996	26,918	3	0	3	0
Modina Fish	275	3,304	3,580	1	1	2	0
Mondal Fish	754	10,552	11,305	0	1	1	0
Satata Fish	3,174	44,429	47,603	2	2	3	0
Satkhira Feed	173,935	0	173,935	-3	0	-3	0
GHERS by WFC	2,985,337	146,104	3,131,440	2,709	175	2,883	925,274
Total Shrimp	3,168,800	1,065,296	4,234,096	2,737	199	2,936	935,419

*Jobs are calculated using job model to estimate the across the value chain results of job creation.

Source of data: Partner interviews and WFC

Leather Products

A. WORKFORCE DEVELOPMENT

Workforce development with Apex Adelchi - ongoing

The workforce development training program that PRICE is facilitating at Apex Adelchi (AAFL) premises (leveraging Apex resources and facilities), in collaboration with Leather Goods and Footwear Manufacturers and Exporters of Bangladesh, (LFMEAB) is approaching its goal of developing the skills of 800 new workers. 496 trainees (148 males, 348 females) have taken this training program which started on 1 February 2010 and will continue till January 2011. 211 trainees were employed at AAFL and the rest obtained jobs in other footwear companies including Blue Ocean, Apex Gallerie and other organizations. The main focus of the training was on shoe manufacturing operations such as cutting/manipulating of leather, prefabricating and sewing, lasting and finishing. In addition, trainees are also shown demonstrations on industry safety, discipline, and the basics of shoe engineering. The cutting department workers are trained on cutting direction, pairing, and machine pressure. The sewing workers are trained on skiving, splitting, folding, edge finishing, thread, needle, and machine adjustment. Lasting workers are trained on toe and heel lasting, machine adjustment, and finishing chemicals.

The lead trainer (under PRICE STTA) has been coordinating the program and is assisting four floor supervisors of AAFL to implement the program.

Workforce development with Landmark Footwear Ltd.- ended

The skills training program with Landmark Footwear Ltd. (LFL) in collaboration with LFMEAB that begun in April 2010 ended this quarter. The program achieved its goal by developing the skills of 550 new workers for the footwear sector. This 12 month program received positive responses from the trainees and it ended in just nine months. Currently 450 of the trained workers are now working for LFL and are contributing to expanding its export earning. Each trainee received on the job training on cutting, sewing, and lasting for two months.

The PRICE master trainer coordinated this program and also guided three supervisors from LFL in assisting implementation. The trainees were initially oriented with safety measures, discipline, types of shoes, and its components. The major areas of the hands - on training were the same as in the training for AAFL.

These newly trained workers contributed to the main production stream which helped earn more from export business.

Workforce development with FB Footwear Ltd.- ongoing

The workforce skill training program under the tripartite agreement between PRICE, LFMEAB and FB Footwear Ltd (FFL) is also approaching its end. Started in July 2010, the aim of the program was to develop the footwear manufacturing skills of 1,000 new workers and to subsequently create job opportunities for them in the next 12 months. Getting very quick responses from the job seeking population, FFL worked aggressively with PRICE and in just seven months time the program will achieve its target. In this quarter, 537 (215 males,

322 females) workers are trained through an on the job training program that focused on: cutting direction, pairing, machine pressure, skiving, splitting, folding, edge finishing, thread, needle, machine adjustment, toe and heel lasting, finishing chemicals, and packing. Of these trained workers, 363 obtained full-time jobs at FFL and are contributing to the expansion of sector export business. The PRICE trainers have been coordinating the program and assisting four supervisors to conduct the program.

Workforce development with PICARD Bangladesh Ltd.- New Initiative

The aim of this new skills development program is to train 600 new workers to develop their skills, generating employment, and increasing production and sales in the sector. This is the first initiative PRICE has taken in the leather goods sector in collaboration with PICARD Bangladesh Ltd. (PBL) and LFMEAB. Started in November 2010, this 12-month on-the-job training program will train 30-50 new workers at a time for two months. Given the complexity of the leather goods manufacturing operations and lack of related qualified trainers, PRICE and PBL decided to employ four of PBL's expert floor supervisors to conduct the training program. PRICE engaged one woman trainee, who would be a trainer in future, to learn from this program so that in future she can be used in other initiative as a trainer. PRICE introduced a new orientation program (brief on PRICE, training pattern, sector overview, future prospects, and factory visit) for all the new batches to give them an understanding of the program objective and their future prospects. This is done to increase their motivation to remain in the sector. The training areas were customized to facilitate learning in manual stitching, perforating, cementing, trimming and finishing in addition to other regular activities such as machine cutting and sewing. In this quarter 60 new workers (32 males, 28 female) are participating in this training program.

Workforce development with Bay Footwear Ltd.- new initiative

The aim of this new project (tripartite between PRICE, LFMEAB and Bay Footwear Ltd, BFL) is to train 200 individuals in the next six months beginning in October 2010. Each trainee will receive formal on-the-job- training over a period of two months, on topics including cutting, sewing, and lasting. 100 new workers (33 males, 67 females) are already undergoing the training.



PRICE employed one trainer from its pool to coordinate the training program leveraging the skills of three floor supervisors from BFL to implement. It is expected that these 200 trained workers will find job opportunities in the footwear sector to contribute more to export earning.

Workforce development with Bengal Shoes Industries.- New Initiative

This new tripartite skills development program between PRICE, LFMEAB and Bengal Shoe Industries Ltd. (BSIL) will train 1,200 new workers and create job opportunities for them in

the footwear sector. Each trainee will receive formal “on the - job” training on cutting and sewing-prefabricating for two months each. Every month a group of 150 - 200 trainees will be taken in to be trained for a total of six to seven groups over the next 12 months. Two shifts will run to avoid the co-occupancy of machines and tools. In December 2010, 157 (34 males and 123 female) started their trainings. The partners invested USD 40,000 to set up a separate training section for the trainees. PRICE engaged one lead and two assistant trainers to run this Lakshmipur-based training program. It is expected that this program will play an important role in the economic activities in that area by creating new job opportunities for all successful trainees who in return will contribute directly to export earnings.

Workforce development with Apex Leather Craft & Footwear Ltd (ALFAL)- New Initiative

PRICE signed another tripartite agreement with LFMEAB and ALFAL to initiate a new training program in December 2010 with the aim of developing the skills of 200 new workers. This will create job opportunities for them in the sector, particularly in leather goods. Each trainee will get a formal on-the-job training on cutting and sewing and prefabricating and assembling for two months in the ALFAL factory premises. Every month a group of 40-50 workers will be trained.

B. ASSISTANCE TO SMEs

Workforce development with LTSE member – Ended

PRICE, as a part of its continuous support to SMEs, supported a skill development training program for the newly recruited workers of four member enterprises of the Leather Technologist Small Entrepreneurs (LTSE), an informal group of 13 enterprises that PRICE helped form in 2009. PRICE assisted LTSE members link with lead firms and get better access to finance. Three members are listed with one leading organization, Aarong, as subcontractors and received loans from two banks. Four members (including the three mentioned above) of the LTSE expanded their businesses on the basis of the support they received from PRICE and requested PRICE for more assistance in developing the skills of 50 new workers they were of hiring as a part of their expansion plan. This training program started in August 2010 and ended this quarter. Forty out of these 50 workers joined those four small enterprises and are now contributing to their expansion of business. PRICE trained these workers and guided the owners on how to distribute loads among the trained people.



Developing small producers – Aarong subcontractors

In this initiative PRICE facilitated the creation of a comprehensive development plan for 20 small producers who were part of the pilot on “Techno Motivational Training.” This pilot started in August 2010 and was designed to develop 20 small enterprises who are subcontractors to Aarong. This covered areas of development and potential investment to be made by both the

subcontractors and to some extent by Aarong. Aarong authority is presently considering the plan. The phase one training covered: Session 1: Basics of Leather (leather identification, leather manipulation – how to avoid defects, follow fiber direction to reduce loss, leather storing); Session 2: Materials Savings/Efficiency (reduce rework/rejection i.e. right work at beginning, develop the habit of PRODEFCOST exercise); Session 3: Production Planning (basic steps to putting the work order into production, market information on availability of RM/alternative for reducing inconsistency between approved samples and mass production, delivery time); Session 4: Quality Awareness and Workforce Retention (my understanding of quality, GIP, packing and transportation, impact of poor quality product in the whole value/supply chain); Session 5: General Management (develop communication skills, inventory management, basic documentation); and, Session 6: Factory Visit to see better business practices.

Process upgradation pilot with seven SMEs- ended

The pilot process upgradation initiative begun in June 2010 by PRICE in collaboration with seven small enterprises ended this quarter. The aim of this pilot was to show small enterprises ways to become more competent in the market by reducing inefficiencies from their production processes in terms of costing, manipulations, inventory, and sequences of production operations.

Out of these seven enterprises, five implemented several recommendations made by the PRICE expert, and achieved significant benefits in some specific areas, particularly in reducing consumption of raw materials such as adhesive, leather, increasing productivity in cutting and prefabricating operations, edge coloring of cut components, and pressing on folded components.



Before: Working on the floor



After: Work habit changed; working on the table

Supporting selected SMEs for DITF, 2011

PRICE will support ten SMEs participating at Dhaka International Trade Fair, DITF in 2011. The aim of the initiative is to help the sector by representing the SMEs that will showcase their products. SMEs of the overall leather sector of Bangladesh will gain more exposure to the market and can develop new businesses linkages to expand their businesses. DITF is one of the biggest national events organized by EPB and supported by BPC, MOC to promote the businesses of small enterprises, particularly the new ones.

SMEs were selected on the basis of the following criteria:-

- Those who requested PRICE to provide technical assistance to become competitive;
- Sincere interest of management to new ideas and their implementation;
- Ready to share cost and relevant information with other stakeholders; and
- Having institutional capacity to implement relevant recommendations.

The leather sector is dominated by nearly 2,000 SMEs working in the sector. Most SMEs failed to graduate to the next level since they started their business due to limited access to market information and market linkages, a poor image in the market about the SMEs and their capabilities. SMEs also lack management skills in overcoming these constraints.

In this particular case, PRICE will assist ten SMEs to prepare for the fair in the areas of product development, product display, product catalogue development, and arranging business meetings.

The actions taken under this plan are expected to result in expanding businesses by increasing sales (spot and future) and by creating new business linkages.

C. QUALITY IMPROVEMENT OF BASIC RAW MATERIALS

Flaying campaign

PRICE has been supporting the sector to improve the quality of basic raw materials, i.e. leather at origin, for the last two years. The basic objective of those initiatives has been achieved as it created awareness among the stakeholders, particularly the concerned association. As a result, two associations (Bangladesh Finished Leather, Leather Goods & Footwear Exporters' Association, BFLLEA and Bangladesh Tanners Association, BTA) took the ownership along with the Leather Sector Business Promotion Council, LSBPC, Ministry of Commerce, Government of the People's Republic of Bangladesh and PRICE supported them to conduct this year's flaying campaign in November 2010.

Every year the Bangladesh leather sector procures 200-220 million square feet of raw skins/hides locally. Out of this approximately 40% is collected during Eid-ul-Azha (Qurbani). But due to a lack of awareness and basic knowledge on flaying and skin preservation techniques of the people who are involved in sacrificing cattle and collecting hides/skins during Eid, Bangladesh is losing significant commercial value (20%) of leather and leather products.



This awareness raising flaying campaign aims to instill a sense of social responsibility among the concerned stakeholders to take better care of skins/hides and save valuable resources (leather) during Eid-ul-Azha. It was decided that the following activities would be completed to raise awareness: 75,000 posters on the Dos and Don'ts of flaying were printed to circulate across the country (64 districts) through the Deputy Commissioner's offices; information was disseminated to concerned stakeholders through the religious leaders and therefore imams would be trained (basics of Anthrax will also be incorporated) on flaying in Dhaka (Islamic Foundation, Agargaon) and Chittagong (Imam Training Academy (ITA), Hazi camp, Pahartoli, Chittagong); and, media (electronic) would be requested to create awareness through their CSR programs.

PRICE supported the development of the posters and conducted the imams orientation in collaboration with Leaders of Influence (LOI) program in Dhaka and Chittagong. 200 imams (100 each) from different areas attended this training. The objective of this training workshop was to train the religious leaders on proper flaying of hides/skins to increase the awareness regarding the economic contribution of quality skin/hide in the national economy. It is expected that these religious leaders will leverage their images in the society and share information/knowledge of the economic impact of proper flaying and preservations to the believers at the mosques they are employed at particularly during Qurbani.

D. QUANTITATIVE RESULTS

In Oct-Dec 2010, Leather sector partners have increased their sales by \$2.8 million, created 574 jobs and increased investment by \$ 219,623. Also, \$53,600 in loans has been awarded to three leather products SMEs, as a result of project initiatives.

Achievements in Leather Products during Oct-Dec 2010	
Sales increased	\$2.8 million
New jobs	574
Investment increased	\$219,623
Firms received bank loans	3
Training for workforce development	1,400

Partner-Wise Results in Leather products

Partners	Sales Increased (USD)			No. of Jobs Created			Investment Increased (USD)
	Domestic	Export	Total	Male	Female	Total	
LFMEAB	0	2,813,000	2,813,000	218	356	574	54,406
Apex Shoes	-	567,000	567,000	63	148	211	-
Bay Footwear	-		-	-		-	14,406
Jennys Shoes	-		-	-	-	-	-
Landmark Ltd	-	1,350,000	1,350,000	-	-	-	
Apex L/R Craft							-
FB Footwear		896,000	896,000	155	208	363	-
Piccard BD Ltd							
Bengal Footwear							40,000
LTSE	23,958	-	23,958	-	-	-	165,217
BAG	3,334	-	3,334			-	81,159

Sassy	12,681	-	12,681	-	-	-	28,986
3 Tech	-		-	-	-	-	31,884
SAAuthentic	7,942		7,942	-	-	-	23,188
Total	23,958	2,813,000	2,836,958	218	356	574	219,623

Source of data: Partner interviews

Equity Integration

Throughout the fish and shrimp value chain, including shrimp processing plants, women's participation is traditionally low, on average at three percent. PRICE plans to increase women's participation from 3% at the national level to 20% among PRICE aqua partners. To help achieve this goal, PRICE signed a second MOU with JSK, a woman dominated farmer group and NGO. PRICE also agreed to sign an MOU with Polli-Bodu Kallan Sanghtha (PBKS), an association organized and operated by housewives to train hundreds of additional housewives during 2011 and the first half of 2012 in homestead aquaculture focusing on increased household income, self-employment, opportunistic employment, income generation, family nutrition, food security and women's empowerment. Including women, socially and economically, through integrated farming efforts, has helped resource-poor farming families to increase their fish-based consumption and limit chronic malnutrition in rural Bangladesh.

PRICE tries to work with young adults and women as much as possible to ensure their participation in aquaculture. During this quarter, a total of 13,145 participants were trained under productivity, management and workforce development of which 3,175 were female participants, or approximately 24% of the total participants.

Interventions took place during this quarter in the horticulture sector which included the training of 77 women participants that collaborated with Krishok Bandhab Karmoshuchi. The training was on improved Potato Cultivation Technology Farming and included contract farming systems aimed at increasing the knowledge and patronizing women farmers on potato cultivation. They are also going to be involved in the vegetable promotion activities. Yard meetings on the use of organic fertilizer were organized for the women participants to ensure quality vegetable cultivation and to adopt contract farming system. In total, 143 female farmers were trained on improved technology and management of farming during this quarter in the horticulture sector.

Regarding consumption of fish at the family level, the micro level farmers consume around 30 to 40 percent of their total production whereas small farmers around 5 to 10 percent, medium farmers around 5 percent and large farmers less than 1 percent of their total production. Farmers of the horticulture sector consume approximately 10% of their produced vegetables particularly eggplant, cabbage, cauliflower and tomato.

During this period, PRICE implemented training programs in the leather sector for 928 female workers. The result was full time new job creation for 574 persons of which 357 were female. Presently they are receiving Tk. 2,500-3,000 as salary plus benefits. They are now proudly contributing to their household income. These female workers are improving their standard of living by having the opportunity to work daily and generate consistent income as they are ensured equal pay as male workers.

ANNEX 1

PRICE PERFORMANCE: OCT-DEC 2010 AND ACCUMULATED

Indicator & Sector	Unit	Life of Project Target	Oct-Dec 2010 Achievement		Accumulated Achievement	
			Achievement in quarter	% Achievement vs. quarter target	Achievement till Dec '10	% Achievement LoP Target
Total Value of Sales Increased	USD	200,000,000	18,384,361	141%	70,408,999	35%
Domestic		116,994,616	13,705,499	168%	48,803,665	42%
Export		83,005,383	4,678,861	96%	21,605,334	26%
Aquaculture		105,000,000	13,232,371	189%	51,701,795	49%
Horticulture		40,000,000	2,315,032	73%	8,826,714	22%
Leather/Leather products		55,000,000	2,836,958	98%	9,880,491	18%
# Full-time equivalent Jobs Created	Number	40,000	3,673	121%	14,916	37%
Aquaculture		26,000	2,757	138%	10,042	39%
Horticulture		10,500	342	43%	3,059	29%
Leather/Leather products		3,500	574	239%	1,816	52%
Male		34,383	3,081	118%	12,855	37%
Female		5,617	592	137%	2,061	37%
Total Value of Investment Increased	USD	4,000,000	1,437,265	479%	3,830,980	96%
Aquaculture		2,100,000	1,211,745	1212%	2,675,358	127%
Horticulture		1,000,000	5,897	6%	499,414	50%
Leather/Leather products		900,000	219,623	220%	656,208	73%
Persons participated in WF-dev prog	Number	15,000	3,735	287%	7,596	51%
Aquaculture		4,000	2,315	463%	3,457	86%
Horticulture		2,500	20	7%	116	5%
Leather/Leather products		8,500	1,400	280%	4,023	47%
Male		8,042	1,351	173%	2,710	34%
Female		6,959	2,384	458%	4,887	70%
Personnel trained on Bangladesh labor law	Number	1,064	0		364	34%
Aquaculture		1,064	0		364	34%
Male		732	0		242	33%
Female		332	0		122	37%
Firms and farmers receiving USG assistance to improve management practices	Number	31,300	7,050	201%	14,148	45%
Aquaculture		26,047	6,800	227%	12,135	47%
Horticulture		5,053	250	50%	1,966	39%
Leather/Leather products		200	0	0%	47	24%
Male		24,519	6,079	216%	11,236	46%
Female		6,781	971	138%	2,912	43%
Firms and farmers receiving USG assistance to access formal loan or micro-credit	Number	7,025	313	69%	2,681	38%
Aquaculture		4,110	310	103%	1,637	40%
Horticulture		2,900	0	0%	1,037	36%
Leather/Leather products		15	3	150%	7	47%
Male		3,502	72	32%	1,245	36%
Female		3,525	241	107%	1,436	41%
Firms and farmers receiving USG assistance to invest in improved technologies	Number	72,300	6,296	79%	38,291	53%
Aquaculture		58,600	5,166	74%	31,826	54%
Horticulture		13,512	1,130	113%	6,438	48%
Leather/Leather products		188	0	0%	27	14%
Male		60,880	5,309	78%	31,930	52%
Female		11,420	987	82%	6,361	56%

Source of data: Small sample surveys for farmer groups and partner interviews for enterprises. In the case of job creation, a job model is additionally used to estimate the across the value chain effects (see Annex 2).

Note: Accumulated achievement till Sept 2010 reported in FY 2010 Annual Report has been corrected for this report for first three indicators (sales, jobs and investment). After correction, the figures became a little higher.

ANNEX 2

Performance Management Plan

The M&E system is the basis for quarterly and annual reports to USAID. The PRICE team collects and analyzes performance information regularly; PRICE not only collects performance and impact data; it adds value to the raw data by performing appropriate analysis and providing context for data interpretation, thereby transforming raw data into useful information. Results from the analyses help determine whether adjustments to the project implementation plan are required. Finally, this information is conveyed to relevant internal and external parties through communications (i.e. knowledge sharing) and achieves impact as knowledge is acted upon. An understanding and agreement among all stakeholders of the project is developed to establish an effective performance management plan. All of them are the users of the system.

a. Features of the System

The M&E system is designed to involve all technical team members and project counterparts. This approach has several benefits.

Efficiency. Because technical team members and counterparts have first-hand knowledge of their activities and resulting impacts, they are best suited to efficiently collect and verify basic M&E data in their respective technical areas.

Ownership. By being involved in project M&E efforts, technical team members can ensure that the information generated is relevant and consistent with the interests of the project while our counterparts will see the demonstrated success of reforms.

Feedback. Having collected and analyzed M&E information, technical team members and counterparts are aware of project progress and will be able to use M&E information to guide project implementation.

The project M&E is responsible for organizing data collection. They ensure that project team members have the necessary tools to collect data and that they collect it consistently and at the appropriate frequency. They verify data quality and analyze and report trends. Annually, they review the appropriateness of the PMP and make necessary additions or adjustments to the existing indicators. The COP/DCOP supervises the overall M&E system. The technical area specialists are responsible for managing the process of primary data collection and entry in their respective technical areas. They then use the information to make management decisions about implementation activities. These technical specialists communicate progress to PRICE counterparts informally during the course of technical assistance and formally in quarterly reports to help them make decisions about necessary and priority interventions.

PRICE collects basic M&E data from the various administrative and technical records of the project, specially-designed surveys, and focus groups. PRICE also consults records, statistics, surveys, and databases maintained by the Government of Bangladesh (GOB), USAID, other donors, and NGOs as additional sources of data. There must be a balance between M&E data collection and technical work. Our M&E system is designed to allow the efficient collection of data by project staff or counterparts.

b. The Indicators

The basic premise of the project is that true poverty reduction is about ensuring decent, sustainable jobs for vulnerable groups, with such jobs arising from increases in sales and investment across value chains in response to market demand. Indeed, the PRICE contract stipulates that sales, job, and investment increases are the essential project performance targets. As such, the focus of PRICE performance indicators is on sales, jobs, and investment—particularly for the benefit of women, young adults, and SMEs—to achieve equitable growth. These are the performance indicators for the overall strategic objective. All performance indicators have specific targets for the life of the project.

PRICE also uses tracking indicators that allow the project to track other aspects of its work and to support requirements for overall USAID reporting. For example, tracking indicators include disaggregation of performance indicators by gender, age, sector, region, exports, and SMEs. These indicators also track the number of SMEs receiving PRICE assistance and financing, training metrics, and other measures.

PRICE primarily collects data on performance and tracking indicators relevant to activities directly implemented by the project in collaboration with counterparts. This principle of “manageable interest” helps ensure that the results reported by PRICE’s M&E system are within the project’s ability to influence, particularly at the KRA level. Through these performance and tracking indicators, PRICE is able to accomplish the following:

- Capture and communicate major project impacts
- Track implementation progress against targets
- Supply information concerning major PRICE activities
- Identify problems constraining performance and resolution
- Contribute to USAID’s own performance management and reporting needs

Performance of the project and of the three sectors (Aquaculture, Leather and Horticulture) has been measured using eight defined indicators so far. Two types of indicators have been used to monitor PRICE’s contribution to (1) assessment of the impact of PRICE’s interventions and (2) key indicators of the global U.S. Foreign Assistance Framework. The first category is called custom indicators and the second is called common indicators. *Custom* indicators assess impact or outcome of the project interventions. *Common* indicators are used to report on PRICE’s contribution to the global results of priority program areas of the U.S. Foreign Assistance Framework. All these indicators are measured quarterly or annually throughout implementation in order to evaluate progress towards targets agreed with USAID.

While the indicators included below are intended to be reported on over the life of the project, it is likely that adjustments will be necessary over time. Annually, PRICE reviews the PMP in coordination with USAID and other counterparts, and modify indicators as necessary.

Critical Assumptions

In designing the PRICE M&E system, PRICE focused on indicators within the manageable interest of the activity. This approach allows the project to measure impacts that can, to a large extent, be attributed to the project. The project’s ability to demonstrate improvement in these measures is based on the following assumptions:

- Absence of sociopolitical instability
- No major agro-climatic shocks during the project period. These include major climatic shock such drought, floods and other weather hazards.
- Generally stable fiscal and monetary policy
- Willingness of project counterparts and beneficiaries to carefully consider and implement project recommendations
- Access to available statistics and cooperation in conducting surveys

Custom Indicators

PRICE has used five custom indicators and three common indicators. The custom indicators are:

- i. Indicator 1: Total value of sales increased:
Justification: Economic activities are largely measured by the creation of sales. It is the aggregation of the increase in total value of gross sales of assisted firms that can be attributed to PRICE activities. It is calculated in United States dollars and disaggregated by domestic and export sales.
- ii. Indicator 2: Total number of full-time jobs created:
Justification: True poverty reduction means having a decent job with jobs arising from increases in sales and investment across the value chains in response to market demand.
Full-time equivalent jobs will be defined as those equal to 260 work-days per year for non- agricultural production and 150 days for agricultural production (given the seasonality associated with agriculture work). Only new jobs will count, calculated by taking the total number of work days and dividing by 260 or 150, as appropriate. A new job will be attributed to the year in which the job originated.
- iii. Indicator 3: Total value of investment increased:
Justification: Economic activities are largely measured by increased investment. It is the aggregation of the increase in the total value of investment of assisted firms that can be attributed to PRICE activities. Investment will include loan and private equity. It is calculated in United States dollars and disaggregated by domestic and export sales.
- iv. Indicator 4: Number of persons participating in USAID workforce development programs:
Justification & Management Utility: This indicator measures the number of individuals who enrolled in USG-funded workforce development programs. It is assumed that increased access to quality programs will result in a more skilled, adaptable workforce.
It will give the number of persons participating in USG-funded workforce development programs including, technical and vocational programs and workforce readiness programs.
- v. Indicator 5: Number of staff (workers and managers) trained on key issues of Bangladesh Labor Law 2006*:
It will give the number of persons (workers and managers) participating in USG-funded training programs on key issues of Bangladesh Labor Law 2006.
*It has replaced an older one upon consultation with USAID.

Common Indicators

The common indicators are as follows:

- i. Indicator 1: Number of firms receiving USG assistance to improve management practices.
Justification & Management Utility: Firms improve their productivity, and in turn their competitiveness, by adopting improved management practices.
This indicator measures the number of firms that receive USG assistance to improve their management practices (financial management, strategic planning, marketing, etc.)
- ii. Indicator 2: Number of MSMEs receiving USG-supported assistance to access bank loans or private equity:
Justification & Management Utility: Firms improve their productivity, and in turn their competitiveness, by accessing capital and increasing investment in productive assets.
Number of MSMEs who are receiving assistance from USG supported sources to obtain bank loans or private properties.
- iii. Indicator 3: Number of firms receiving USG assistance to invest in improved technologies:
Justification & Management Utility: Firms improve their productivity, and in turn their competitiveness, by investing in new technologies.
It is the number of MSMEs who are receiving USG assistance.

Indicator reference sheets have been prepared for each indicator in order to provide more detail on indicator definition, units of measure, justification, data collection, and where possible, proposed targets.

c. Use of Case Studies

In some cases, case studies are used to provide deeper understanding of progress or to complement data collected by M&E. However, this should not be confused with the qualitative indicators. This is a very subjective approach and presents a plausible case that progress is being made by using illustrative examples. This is not used as substitute to the other precise measures. Case studies are being prepared by the Communication personnel of the project, under direct supervision of COP. Sector Team Leaders and others can come up with the idea of any seemingly interesting cases being observed within the boundary of Project activities and the resulting impacts. Four types of case studies are prepared: case study, success story, first person story and, photo story. Usually 12 case studies are prepared each year which are submitted to USAID with quarterly and annual reports and then uploaded in the PRICE website.

d. Source of Data

Secondary Source of Data

PRICE M&E uses both primary and secondary sources of information to measure the indicators. Secondary sources can be a range of organizations including the government of Bangladesh (e.g. ministries), EPB (Export Promotion Bureau), DoF (Department of Fisheries), business associations, international organizations such as the World Bank, United Nations, universities, commercial firms and implementing partners like BSFF, BFFEA etc. Data is collected in regular intervals or based on need and a database is maintained for that. This is used for analyzing industry trend, project and sector performance etc.

Primary Source of Data

Primary sources of data are the partners or the beneficiaries themselves. For the three custom indicators (increase in sales, creation of jobs and increase in investment), the source of information is the partners or beneficiaries themselves. PRICE collects data from them directly. PRICE has contract-bound targets in these three indicators. For custom indicator 4 & 5 and common indicator 1 & 3, data is taken from the quarterly training reports produced by the project Training Specialist, and adjusted for the indicators' requirement. Such adjustments include ignoring double-counting when one MSME has received training twice in the same category of assistance, i.e. improved management practices. For common indicator 2 (assistance to access bank loans or private equity), data is collected by regular monitoring of the partner. Sample survey method is not used for this indicator because the extrapolation of survey results might contain high sampling error.

e. Baselines

Baseline is the value of an indicator before the commencement of activities, used for comparison when measuring progress toward a result. Baseline periods are taken as one year right before the impacts are expected on the partners. For the three custom indicators (increase in sales, creation of jobs and increase in investment), PRICE technical team collects baseline information during the process of making MoUs or growth plans with the partners. However, the quality of data collected at that time may not be the optimal because the technical team has only initial idea about the partner at that point. So the data collected during the MoU process needs to be adjusted sometimes. For the producer groups or associations or cooperatives with hundreds of farmers, baseline data is collected during the first training sessions conducted for the farmers. The hired consultants as well as the technical team members present in the training sessions collect the data from the partners in an organized way.

f. Data Collection Tools

Data Elements

Many of the project's proposed indicators are aggregate indicators, made up of various data elements. M&E works with each technical team and counterpart to design database spreadsheets, forms, and surveys to capture and manage these data elements.

Tools

Formats for data collection have been designed by the PRICE M&E taking suggestions from the technical team. From time to time, these have been modified to fit the project requirement. PRICE uses M&E-designed formats to collect data on the first three custom indicators (increase in sales, creation of jobs and increase in investment) based on the different types, sources and methods of data collection. Detailed guidelines are attached with each format. All filled out data forms are signed by the interviewees and the interviewers.

There are other indicators which are related to training or assistance provided by PRICE. Quarterly Training Reports generated by the PRICE Training personnel is the source of information in this case.

g. Methods of Data Collection

For the three custom indicators (increase in sales, creation of jobs and increase in investment), performance of the partners is collected quarterly from the partners after the baseline period ends. The quarters are calendar quarters. Baseline and quarterly performance data are collected in two ways: partner interview, and, sample survey.

The first method (partner interview) is suitable for the individual SMEs PRICE is working with. As the name suggests, the source of information for this method is the partner or client with whom the project is working with. The approach is to proceed in a way of discussion with the partner enterprise and lead the discussion according to the need for information on performance. The partner might recall the information from memory or might check relevant business records for providing the information. Format for recording the gathered information were designed by the M&E. The interviews are conducted by taking assistance from the PRICE technical team who have contact with partner enterprises and thus can easily collect data from them ensuring the quality of data.

The second method for data collection, sample survey, has been used because in some cases performance data on sales, jobs and investment was not readily available from the partners. Those partners do not have any organized way of keeping records on parameters like sales, jobs or investment. Thus to collect data from those partners such as fish farmers' associations who have large number of members (from 60 to 900), sample survey method has been used. The source of information in this case are the beneficiaries of the interventions, i.e. the members of the associations etc. These surveys can be of two types: a) with statistically viable sample size, b) with a minimum sample size of 30 or larger (to approach to normal distribution).

For *type a* survey, statistically viable sample size is calculated beforehand considering the character of population to be surveyed. Professional survey teams work for data collection after taking detailed briefing on the project and process of data collection from the PRICE technical and M&E teams. Formats for data collection are provided by PRICE M&E. Sample points are selected at random. However, the cost and time required for conducting this type of survey for each partner with combined body of micro enterprises were considered huge to be conducted quarterly. Thus it has been decided that from now on PRICE will conduct this type of full-fledged surveys only annually, at the end of US fiscal year, September.

For *type b* survey, a minimum sample size of 30 or larger is taken. Statistical viability behind such decision is that when the sample size is greater than 30, the distribution approaches normal distribution. Also the homogeneity in the population (similar type of land, weather, availability of inputs, market linkage, sharing of knowledge etc.) is considered here. For the quarterly reports, these types of small surveys are conducted from now on. However, these quarterly survey results are verified during the later annual survey.

Data Collection by Third-Party

If necessary, PRICE may subcontract to a local research entity to conduct wide-scale surveys for this performance monitoring plan. Because of the huge size of surveys required at the end of each year, PRICE hires third party professional survey teams. These third party survey teams ensure the integrity of data to some extent as they are not involved in the project. M&E selects the surveyors from a pool of candidates, given the required qualification of a surveyor.

Data Entry

For the data collected on enterprise performance in each quarter on the first three indicators, the respective Sector team performs initial data entry in the soft copy of the Enterprise data format (in Excel). This is later checked by M&E and confirmed for final submission. M&E then enters the data into the M&E database.

For the sample surveys conducted, appropriate format for data entry is required. Format for data entry is prepared by M&E. Easy to use MS Excel format is being used. For the small quarterly surveys of sample size 30, data entry is usually done by the respective Sector Team (or in some cases, the M&E Specialist) who have collected data. For the bigger surveys conducted by hired survey teams, data entry is done by the hired professional data entry operator. These third party survey teams provide data in soft copy as well as the hard copies of filled out formats.

h. Quality Control

Data Quality Analysis

M&E Team conducts visits to some sources of data to verify the collected data. These are random verifications and conducted without prior notice. Data verification is also done over telephone with the partner or beneficiary. M&E team talk to the partner or beneficiary and in this way, check back with the data already at hand. If any discrepancy is observed, it is consulted with the technical team before correction. At least 10% data verification is done as advised by USAID. If required, M&E team takes help from the technical teams for verification. After verification is completed, M&E signs on the data formats.

After that, the PRICE technical team provides initial quality control for the various raw data elements. Sector team examines the data to identify common errors including logical inconsistencies, out-of-range values, significant departures from trends, or other errors so that they can be immediately addressed.

The project M&E is responsible for data quality control after data entry. Around 10 percent of the tabulated data is compared with the raw data forms to ensure accuracy of data entry. M&E then perform basic data analysis and tabulation to identify potential erroneous data. When errors are identified early, M&E make appropriate corrections by coordinating and consulting with counterparts as appropriate.

As some indicators' information is collected from the training reports, the data quality of training report is also important. To ensure that quality, the Training Specialist conducts visits to the ongoing training sessions, consults with the partners and beneficiaries, checks the quality of training administration etc. and provides on-spot recommendations. S/he also gives the feedback to respective Sector team.

Data Quality Criteria

Five related standards are used to examine data quality in more depth¹.

Criteria for Good Data Quality

1. Validity

¹ Definitions are derived from USAID Programming Policy, ADS Chapter 203 Assessing and Learning, p. 20.

2. Precision
3. Reliability
4. Timeliness
5. Integrity

(1) *Validity*. An indicator should clearly and adequately represent the intended result.

- *Attribution*. Does the indicator measure the contribution of the project?
- *Bias and/or Sampling Errors*. Are there any biases or sampling errors that affect the data?

(2) *Precision*. Data should be sufficiently precise to present a fair picture of performance and enable management decision-making at the appropriate levels. Also, there should be a sufficient degree of confidence in the data's accuracy.

(3) *Reliability*. Data should reflect stable and consistent data collection processes and analysis methods over time, so that changes in data are not due to changes in the data collection method.

In other words, if the data collection procedure were repeated, the same result should occur.

(4) *Timeliness*. Data should be timely enough to influence management decision-making. There are two key aspects of timeliness. First, data must be available frequently enough to influence decision-making. Second, data should be current enough when available.

(5) *Integrity*. Data that are collected, analyzed, and reported should have established mechanisms in place to reduce manipulation. There are generally two types of issues that affect data integrity.

The first is inaccurate transcription. For example, a number might be incorrectly entered into a database system or recorded in a performance report. Data integrity is at greatest risk of being compromised during collection and analysis. The second, and more complex issue, is whether there is any incentive on the part of the data source to manipulate the data. For example, if a project obtains data from stakeholders who depend on funding from the project, the stakeholder may have an incentive to skew data.

Data Quality Analysis (DQA) by USAID

USAID conducts annual DQA visits to PRICE project areas and meets partners, stakeholders, consultants. The team discusses with the partners, beneficiaries and also check on some required documents on the spot. USAID also meets PRICE personnel for this and discusses the whole data collection, quality control and reporting process in detail. Based on that, USAID prepares its annual DQA report for the project.

Potential for Double Counting

PRICE works to minimize potential double counting through close coordination between sectors and technical teams. The project M&E reviews indicators with each team and identify areas where overlapping between sectors may occur. Once identified, the teams work together to determine how the data will be monitored and reported.

Double counting may also occur between PRICE and other USAID projects operating under SO 12. The M&E will identify these situations and work with partner projects to determine if the results may be better reported through one or the other project. However in some

situations, it may be appropriate for both projects to monitor the same data. In these cases, the project may still monitor and report on the data but will report the magnitude of potential overlaps. With this information, USAID is able to adjust for double counting when consolidating indicators from various partners.

i. Data Analysis

After ensuring data quality, the data is processed and analyzed by the PRICE M&E. MS Excel program has been used for the processing and analysis of data so far. For the three custom indicators (increase in sales, creation of jobs and increase in investment), separate processing techniques are used for data collected from enterprises directly (by using Enterprise Data Format) and the data collected from the combined body of beneficiaries, i.e. associations or cooperatives (by using sample survey method and format). Data from sample surveys is extrapolated for getting the figure for the whole populations (taking cultivable land area as the basis). PRICE has a plan to establish a software for data entry and analysis of the collected data.

However, the process of measurement of performance is same for both: comparing performance period results with the baseline period data. The performance period data is compared with the same period in baseline and the resulting change is taken as performance. For example, while calculating quarterly increase in sales (custom indicator 1) of a partner, the gross sales of the partner in that particular quarter is compared with the baseline sales of the partner in the same quarter in the baseline year. That means:

Increase in Sales in the quarter = Value of Sales in the quarter – Value of Baseline Sales in the same quarter

For the second indicator, ‘**Total number of full-time jobs created**’, the creation of jobs are considered across the value chain/s, wherever applicable. For the jobs created directly by the partners (only one node in a value chain), data is collected from the partners. Performance calculation from this data is as stated above: performance period data is compared with the same period in baseline and the resulting change is taken as performance.

For estimating the additional jobs created downstream or upstream or on-farm as a result of partner activities, PRICE has drafted a Job Model (with the help of a short term consultant supervised by DCOP) by September 2010. The Job Model estimates Job Factors for different type of partners (enterprise, group of farmers) in several parts: downstream, upstream and on-farm.

The downstream Job Factor gives the factor by which additional labor days are used by a partner for each additional unit of production in a period. The total quantity of increased production of a partner in a period is multiplied by the respective job factor and the resulting full time equivalent job is calculated. For example, if partner A has increased its production by 500 MT in a period and partner A’s downstream job factor is 5 (labor days per MT of production), the resulting full time equivalent job created downstream is: $(500 \times 5) / 150 = 16.67$. With the accumulated data at hand till September 2010, the downstream job factor has been used to calculate additional jobs created by the enterprises and farmer groups till September 2010 and reported in the annual report of FY 2010. For Oct-Dec 2010 quarter also, downstream job ratio has been used in the same way and it will be continued in next quarters.

The Job Model also helps to estimate the on-farm job factors created by the farmer groups because in Bangladesh scenario, a major part of the labor used in agriculture is family labor for which farmers don't keep records. The on-farm job factor in the Job Model calculates the total on-farm labor requirement factors of different partners which may include hired and/or family labor. For the accumulated data at hand till September 2010, on-farm job factor has been used to calculate additional jobs created by the farmer groups and reported in the annual report of FY 2010. However, this first draft of the Job Model will be strengthened more.

In each sector, all the partners' performances are summed up for getting the aggregate performance on the 3 indicators for the sector. Then the three sectors' performances are summed up to get the project performance.

While analyzing the data, M&E focuses on the segregation required by the definition of an indicator, i.e. by sector, age, region, export-import etc. After that, the quantitative achievements are linked back to the qualitative improvements by the partners. Qualitative results are collected through regular M&E activities as well as sector activity reports. M&E takes the consent of technical team before establishing such relationship in the analyses.

Attribution:

Obviously PRICE alone is not attributable for the total improvement observed by the partners. However, considering the difficulty in isolating attribution for agro sector where there are a multitude of variables that are impossible to control or easily predict (such as weather and commodity prices), this report simply takes PRICE as one of the attributable factors behind the improvement. Any possible overestimation will be offset by the multiplier effect of the project which PRICE does not measure as performance.

j. Data Management Software

The existing PRICE M&E Database is designed to follow the development of appropriate recording and reporting formats and data collection tools that are consistent with the indicators and information need systems and M&E plans. Project reporting requirements have determined the type of data management, processing, analyses and reporting. Though the present system uses MS Excel application for data processing and reporting, still it takes considerable time and this situation is supposed to worsen with the higher scale of the project. Thus an automated M&E Data Management System or software that captures outputs and outcome indicators using a common user-friendly software package will be developed. This will add flexibility, efficiency to and enhance reliability of the PRICE M&E system. PRICE has already developed the Scope of Work for this and collected proposals for the task which are under review.

Relational database structure will be used to develop the Data Management System for PRICE. This structure will allow automatic navigation in the database and support query facilities. Expected design will include module creation, ID creation, data analyses, upload and download options etc. Around 15 users will access the system and able to see the reports. Access to the System should be secured by password. 4 of these users will have access for data entry (but not uploading) to the system modules. Only M&E Manager will have administrative access to the system.

ANNEX 3

Case Studies



USAID
FROM THE AMERICAN PEOPLE

PRICE

POVERTY REDUCTION BY INCREASING
THE COMPETITIVENESS OF ENTERPRISES

Professional Training Boosts Smritikona as a Shrimp Producer

PRICE promotes improved farming trainings through its GHERS initiative to increase productivity in aquaculture sector.



Photo: PRICE / Faria Selim

"I learned that it is not the quantity of the PLs but the quality and proper gher based farming management, that I learned from PRICE facilitated training, increased the production of my farm" – Smritikona, shrimp producer, Madhhapara village, Bagerhat district.

Smritikona, a mother of two and the ex-ward commissioner of Madhhapara village Bagerhat district, involved herself in *gher*-based farming business (brackish or fresh, shallow water body inside an enclosure for shrimp and prawn culture with or without incorporation of fish). After receiving Modified Traditional Technology (MTT) to improve productivity as part of PRICE's GHERS initiative, Smritikona's shrimp and prawn production increased by 20 to 30 percent. Using her profits, she brought a piece of land for her future security and saving for her daughter's higher education. She is the Chairperson of "*Lokaloy Bahumukhi Samabay Shamity*," a cooperative with a savings of Tk. 1,100,000.

"Last year I had less production due to inadequate knowledge on proper farming and incurred huge loss. I got a return of Tk. 21,000 from an investment of Tk. 43,000 in my *gher*. After receiving the training on improved farming, I made a profit of Tk. 79,875 on an investment of Tk. 54,025" says Smritikona. She plans to transmit the knowledge and skills gained through training to other farming areas she owns for further increased productivity and profit. To her, "good planning, better inputs, and farming management are the key to business profit."

With the commitment to increasing productivity, PRICE's GHERS initiative, in coordination with World Fish Center (WFC) was developed to execute the shrimp (prawn and fish comes as companion crops) component in aquaculture. The purpose of the initiative was to provide technical assistance for increasing yields of approximately 2,000 *bagda* (shrimp) farms during 2009; *golda* (prawn) and fish are incorporated as crop-rotational and overlapping crops in seasonally diverse *gher* ecosystem. This initiative is expected to expand by more than ten-fold by the end of 2011. GHERS is modeled under outgrowing scheme, where depots act as contractors in the Khulna and Bagerhat regions.

Facilitated by PRICE, WFC trains depot staff who work as extension facilitators and trains cluster-based farmers on various production technologies including MTT. Among the three production techniques introduced by WFC, MTT appears most viable and popular among the participating farmers as a low cost method. The trained extension facilitator provides the training to the poor *gher* farmers in the community through group formation. Group sessions, organized based on farming cycles, discuss general problems with aquaculture and integrated shrimp farming. Through these trainings farmers learn about preparation of nursery, grow-out, and its decontamination process, application of fertilizer, and preparation of the *gher*. They also learn about stocking screened shrimp PL in a responsible way, results in increased production. The depots also supply the farmers with good quality PLs and other inputs, the price of which they repay after the harvest. The outgrowing scheme with depot ensures buy-in back that enables farmers to sell their product at fair price. All these trainings and activities enhance lives and increase production of natural foods.



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PRICE

POVERTY REDUCTION BY INCREASING
THE COMPETITIVENESS OF ENTERPRISES

PRICE support enables Hashi Begum to Combat the Odds in Life

PRICE support to small enterprises opens job opportunity for poor and abandoned women.



Photo: PRICE / USAID

"PRICE support to GKSSE enabled me to earn a living and lead a respectful life on my own"- Hashi Begum from Tarakmeru village- Shariakandi, Bogra.

Hashi Begum works in the Grameen Krishok Shahayak Sangstha Enterprise (GKSSE), a licensed business enterprise of an NGO and PRICE partner, in Bogra since 2008. Hashi has a son and lives with her parents.

Hashi got married at a very young age and came to live with her husband in Dhaka city. From the very beginning her husband's behavior towards Hashi was rude. Since her marriage Hashi and her family were abused by her husband and his family for dowry, as her father, being a poor farmer, could not meet their demand. Gradually, his husband's ill treatment became intolerable when she got pregnant and was expecting to have a scissor delivery. Hashi's husband refused to pay for her treatment and sent her back to her parent's place. Hashi's father somehow managed the money for his daughter's delivery. After her child's birth, Hashi once again went to live with her husband in Dhaka. This time she started working in a garments factory to make a contribution to the family income. But later on she came to know that her husband got married for the second time. Her husband threw her out of the house. Having no other resort Hashi came back to her village.

After coming back to her village, Hashi got information about PRICE partner GKSSE. GKSSE produces organic fertilizer (vermin compost) commercially through PRICE technical support and market interventions. PRICE facilitated GKSSE to address the constraints of adequate understanding of organic fertilizer marketing network and system, lack of farmers' and retailers' knowledge on the benefits of organic fertilizer use, its potential, application process and doses. As a whole, PRICE facilitated GKSSE to develop an overall marketing plan and increase its production through technical assistance. PRICE in collaboration with Bangladesh Agriculture Research Institute (BARI) facilitated trainings for farmers on the use of organic fertilizer in producing high value horticulture crops. PRICE also provided GKSSE with technical assistance to establish demonstration plots using organic fertilizer to induce improved farming practices of horticulture crops to the whole neighborhood. For generating a bulk production to fulfill the need of the farmers of the area, GKSSE employed a number of workers to work in the compost plant and Hashi Begum is one of the workers who got a job and training in GKSSE. At present she is engaged in ring preparation, fertilizer purification, weighing and packaging of compost and getting a salary of Tk. 1500 a month from GKSSE. "I was helpless when I was abandoned by my husband. I used to sit at home, jobless without any income. I did not have any means to raise my son and lead a decent life. Now I earn money, contribute to the family and take good care of my son. I even have an extra income from selling milk as I bought two cows with the savings I made from my salary", says Hashi with an anticipation of hope.



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PRICE
POVERTY REDUCTION BY INCREASING
THE COMPETITIVENESS OF ENTERPRISES

Smrity Rany: From Housewife to Footwear Professional in Two Months

PRICE workforce development training creates opportunity for women workers in the leather sector.



Photo: PRICE/ USAID

“PRICE has given me the skill and confidence to grow as a woman professional. I feel proud when visitors praise me, seeing that I am a professional cutter and using the machine with equal skills alongside the male operators.” – Smrity Rani, Village Khilgati, Jessore district

Smrity Rany is a worker in the Landmark footwear industry. She was trained for two months on cutting in the factory and afterwards obtained a regular factory job. She lives in Khilgati village, Jessore with her five-member family.

Smrity Rany was a housewife. Her husband, Chanchal Biswas, did not make enough income in his job as an office assistant, in one of the local NGOs, for them to manage the family expenses. They struggled trying to pay for their daughter's schooling and were often in conflict with each other. To resolve this and make a contribution to the family, Smrity got a job in the garments factory and worked there for some time. But, in garments factory she had to work from dawn to dusk and received low pay, so the problems remained the same.

Smrity learned about a PRICE support skills-training from one of the women working in a leather footwear factory, Landmark Footwear Ltd (LFL). She was selected by the factory for the training, where she learned how to operate the cutting machine, and about tools, leather, and direction of its fiber. She became interested in leather and its properties. Due to her progress and performance, she was offered a job in the factory immediately upon conclusion of her training. Now she earns Tk. 2500 a month. Smrity happily says, “Getting a job is my greatest achievement. Now I can live a better life. I get respect in the family as well as in the community I live in. I even save some money and can look after my children's health and education.”

PRICE recognizes that the leather sector in Bangladesh lacks sufficient skilled workers, particularly in the growing footwear and goods industry. PRICE is committed to work jointly with The Leather Goods & Footwear Manufacturers & Exporters Association of Bangladesh (LFMEAB) to address this critical sector constraint by leveraging its members' resources to facilitate workers skill development initiatives to continue supplying new skilled workers to the sector. Landmark Footwear Ltd (LFL), as a member of LFMEAB, hired 15 skilled workers trained by USAID-PRICE project at TTC, Tangail. Satisfied with the skills of TTC graduates, LFL proposed the association to take a new joint initiative with PRICE for developing 500 new workers for the sector, particularly in footwear, which would benefit the entire industry. LFL agreed to provide a major portion of resources, such as machinery/tools, expertise, training materials and space for this initiative.